HT SERIES DVR USER GUIDE

INDEX

Specifications

MODEL NO.		HT-04	HT-08	HT-16
Camera input		4	8	16
Output		1 BNC or 1 VGA, Selectable	Both 1 BNC and 1 VGA	Both 1 BNC and 1 VGA
Audio input / Output		4 RCA /1 RCA		
Sensor In/Alarm out		1(NC, NO selectable)/ 1(Relay Output)		
Operating System		Embedded Linux OS		
Display Speed		Real Time		
Display Resolution		720 X 480(NTSC), 720 X 576(PAL)		
Display Split screen		1,4, Sequence	1,4,6,8,9, Sequence	1,4,6,8,9,13,16, Sequence
Compression Format		H.264 (DSP)		
Picture quality		4 LEVEL (Super, High, Medium, Low)		
Recording Speed	**NTSC**	120 FPS(CIF) 60 FPS(Half-D1) + 3 FPS(CIF) 30 FPS(D1) + 3 FPS(CIF)	127 FPS(CIF) 60 FPS(Half-D1) + 7 FPS(CIF) 30 FPS(D1) + 7 FPS(CIF)	135 FPS (CIF) 60FPS(Half-D1) + 15 FPS(CIF) 30 FPS(D1) + 15 FPS(CIF)
	PAL	100 FPS(CIF) 50 FPS(Half-D1) + 3 FPS(CIF) 25 FPS(D1) + 3 FPS(CIF)	107 FPS(CIF) 50 FPS(Half-D1) + 7 FPS(CIF) 25 FPS(D1) + 7 FPS(CIF)	115 FPS(CIF) 50FPS(Half-D1) + 15 FPS(CIF) 25 FPS(D1) + 15 FPS(CIF)
Playback Display		1,4	1,4,8	1,4,8,16
Search mode		Calendar, Event		
Playback Speed		Normal, REW & FF [Recorded Speed x2, x4, x8, x16,x32,x64,x1/2,x1/4], Frame to Frame, Pause		
Network Interface		Ethernet		
Network Protocol		TCP/IP, HTTP, DHCP		
Application		Windows 2000 / XP / Vista (PC Client system& IE)		
Web Browser		Internet Explorer		
Backup		Network, USB 2.0Thumb Drive		
HDD		Supports 1 SATA HDD	Supports 2 SATA HDDs	
Power Consumption		12V / 3.3A	12V / 5A	
Operating Temperature		5 ~40℃ (41~104F)		
Relative Humidity		Maximum 80% non-condensing		
Dimension(mm)		337(W) x 256(D) x 60(H)		
Weight(N.W)		Approx. 1.8kgs / 4 lbs (W/O HDD)		

Warnings

Installation and servicing should be performed by qualified and experienced personnel only.

DVR should always remain OFF during any installation process

Product Components

The package contains the main unit and its components as specified below. When you purchase the unit, please check to ensure the components specified below are included:

DVR Set X1

Client Software CD X1

Remote Control X1

Battery1.5V (AAA) X2

User Manual X1

Power Adapter X1

Power Cord X1

1. Features

Excellent picture quality

Allow recording and reviewing in high quality digital image based on H.264 compression method.

High reliability

With Embedded hardware and software design, this maintains higher product reliability compared to common PC type products.

Support Non-English Character and Input for Camera Titles

User can define his own language OSD camera title besides English.

Pentaplex System

Pentaplex System allows recording, backup, networking and playback simultaneously.

Selectable recording setup

For recording methods, users can select frame rate, resolution and video quality individually in order to be appropriate for user's environment.

Remote monitoring

User can search or monitor recorded images remotely by installing exclusive client program on PC via internet network.

Backup

User can backup the recorded file with USB pen drive.

Audio recording

User can record four audio inputs simultaneously. Moreover, user can also listen to the audio in search, live monitoring and play mode.

Various recording methods

DVR unit provides multiple recording methods including manual recording, dates & days recording, hourly schedule recording and sensor & motion detection recording.

Various total monitoring features

DVR unit provides an overall and economical security system through various sensor inputs and contact output control.

Display information in easy-to-understand information method
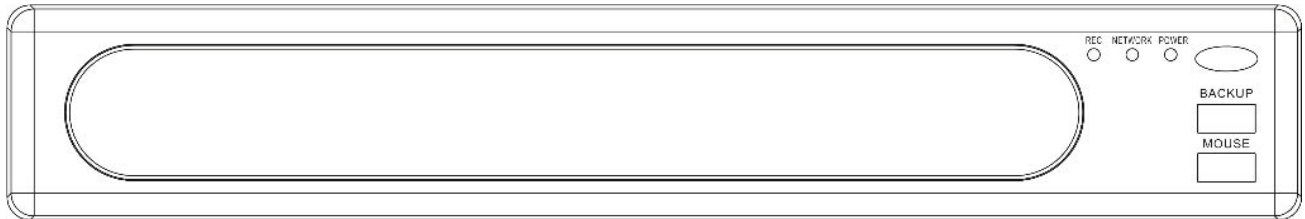
This DVR unit enhanced user friendly display information such as date, time, recording method, recording frame number, HDD capacity in monitoring, recording and playing mode.

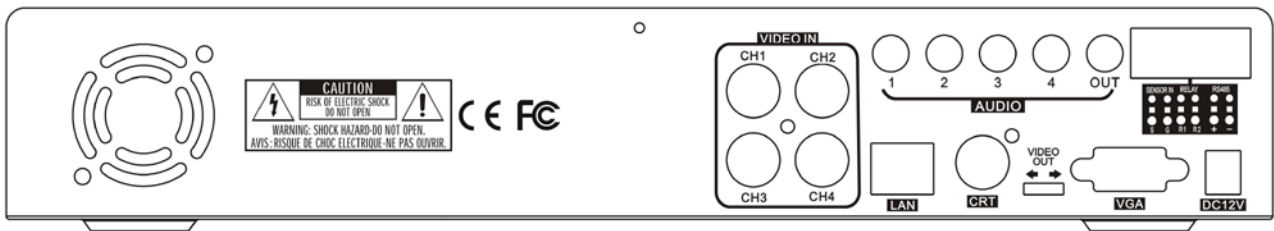**Software Deinterlacing to Enhance Live and Playback Quality**

Support 3G Mobile Phone Viewing (iPhone, Blackberry, Android, Windows Mobile, JAVA, Symbian OS)
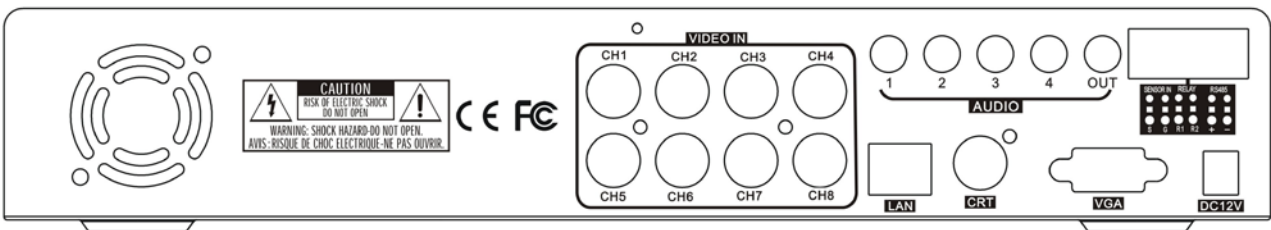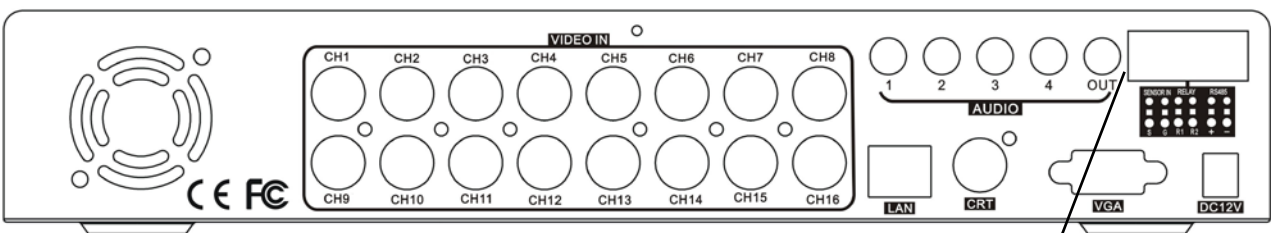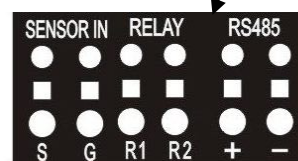
2. Hardware Overview

A. Front Panel

B. Rear Panel

4 Channel rear panel

8 Channel rear panel

16 Channel rear panel

Sensor input / Relay output / RS-485

C. HDD Installation

Remove top cover of the DVR and install HDD

HDD

D. Sensor / Relay/ PTZ connection

SENSOR

SWITCH

S

G

Sensor Input

R1   RELAY OUTPUT

R2

+12V

GND

POWER SUPPLY

Relay Output

RS-485 +

RS-485 -

D+

D-
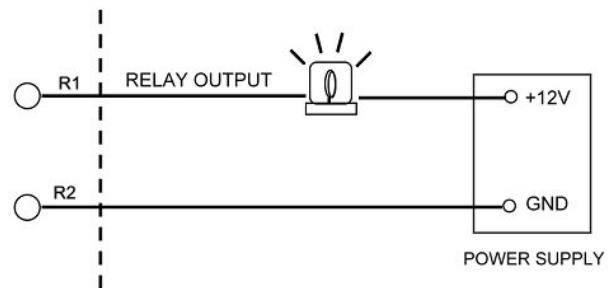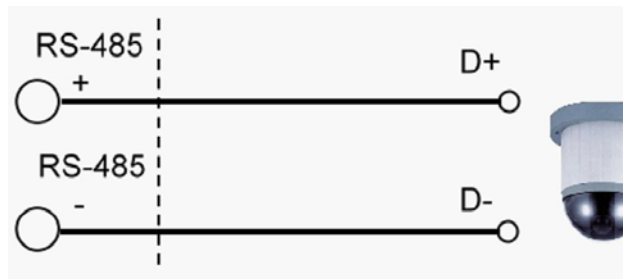
PTZ connection

2-1 Front Panel

REC NETWORK POWER

❶

BACKUP

❸

MOUSE

❷

1. IR Sensor: IR receiver for remote controller

2. USB Connectors: USB ports connection for mouse and USB pen drive.

3. Status Indicator:

   BLUE: Indicates power on status

   RED: Indicates recording status

   GREEN: Indicates network connection status

2-2 Rear Panel
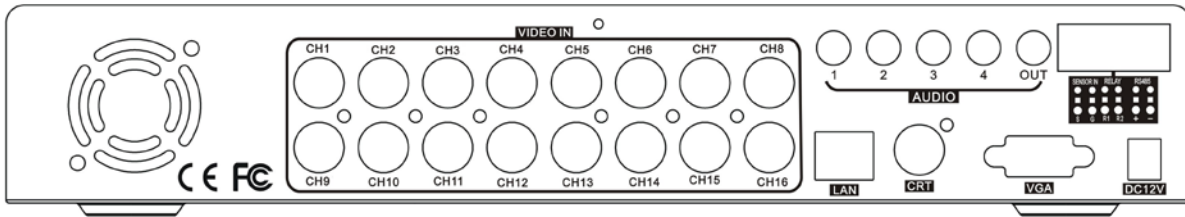
Label	Operation
VIDEO INPUT	4/ 8 /16 connectors for video input.
	Connect camera output to Video-in (NTSC/PAL)
CRT OUTPUT	Connector for CRT TV.
VGA OUTPUT	Connector for VGA monitor
AUDIO	4 Audio Inputs and 1 Audio Output
SENSOR IN	Connection for sensor device.
ALARM OUT	One Alarm device output. On/Off switching by using relay. 1A, 24V or 0.5A,125V
RS-485	Connect to PTZ camera,+→PTZ D+ / - →PTZ D-
LAN	RJ45 connector for LAN connection.
DC 12V	Use 12V DC supplied adapter ONLY.

NOTE:

For 4 Channel DVR model, please select either VGA monitor or CRT monitor before power up the system.

DO NOT CHANGE THIS SETTING WHEN DVR UNIT IS ON.
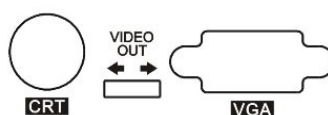
2-3. Remote Controller

PTZ	Enter PTZ mode
Backup	Enter Backup mode
OSD	Display current DVR settings through GUI
Lock	Log off current user
Numbers	Press number button to select channel
ID	Select remote control ID (Click ID button and then number)
Menu	Enter Setup menu
Exit	Exit
Direction	Control direction
↵	Enter

3. System Overview

3-1. General Usage Information

The STANDARD series DVR can be operated with a mouse or remote controller under the four main modes listed below:

Live Mode – Allow user to view all live operating cameras and access to Pan/Tilt camera controls.   In addition, system status information will be shown during live mode.

Setup Mode – Allow user to customize settings for Live viewing, Recording, Backup, and Camera related devices under the Setup Mode.

Search Mode – Allow user to review all recorded footage by using a calendar or event based search.

Backup Mode – Allow user to archive desired data to a preferred supported media. (ex. CD, DVD, USB Backup, Remote Client Software, etc.)

Password Protection

The DVR unit is protected by user ID and password system in order to prevent unauthorized operation. (Factory Default settings are blank for these fields).

IDs and Passwords should be managed by a system administrator ONLY. Different users may be assigned with different levels authorities to the DVR.
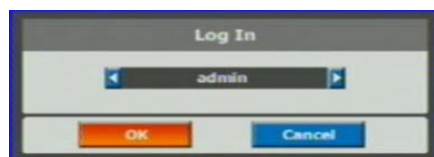
3-2 LIVE Mode

In this section, user will learn how to split the video mode into 1, 4, 6, 8, 9, 12, 16, as well as auto sequencing, PTZ Control, Mouse control, Setup configurations and Backup.
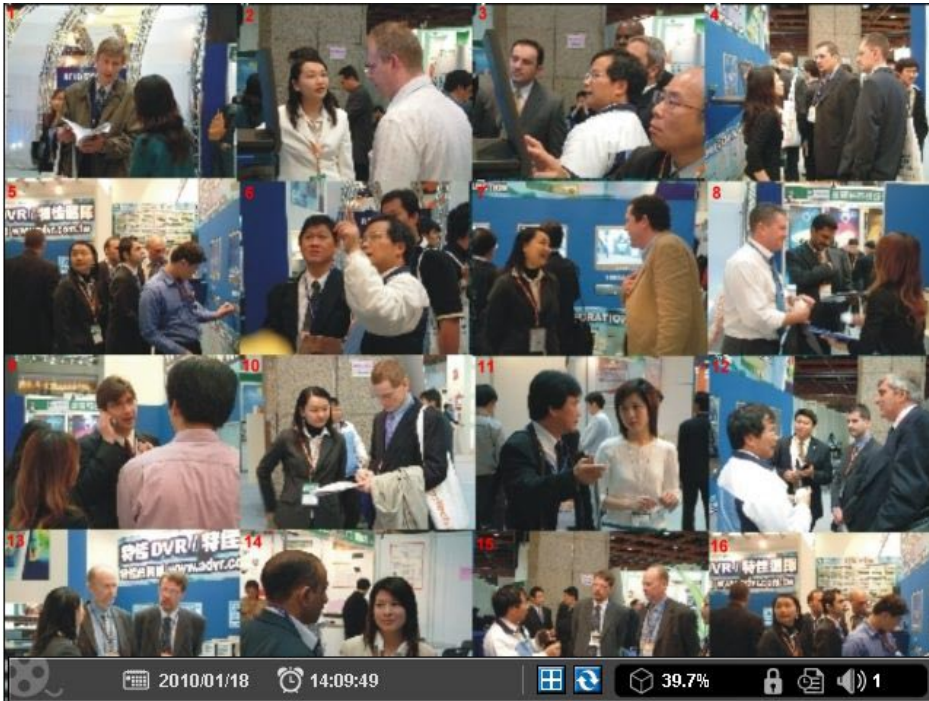
1) Live View Status

Live View indicators allow user to view the current status of the DVR system.

🕐	Recording indicator
⚠	Event recording indicator
🚲	Motion detection indicator
🔔	Sensor activation indicator

2) Live Menu Bar

Live Menu Bar allows user to view DVR system status and use the shortcut.

Screen Split mode change   Lock/ Unlock indicator   Audio out channel

Date / Time   Sequence activation   Hard drive usage

Scheduler activation indicator
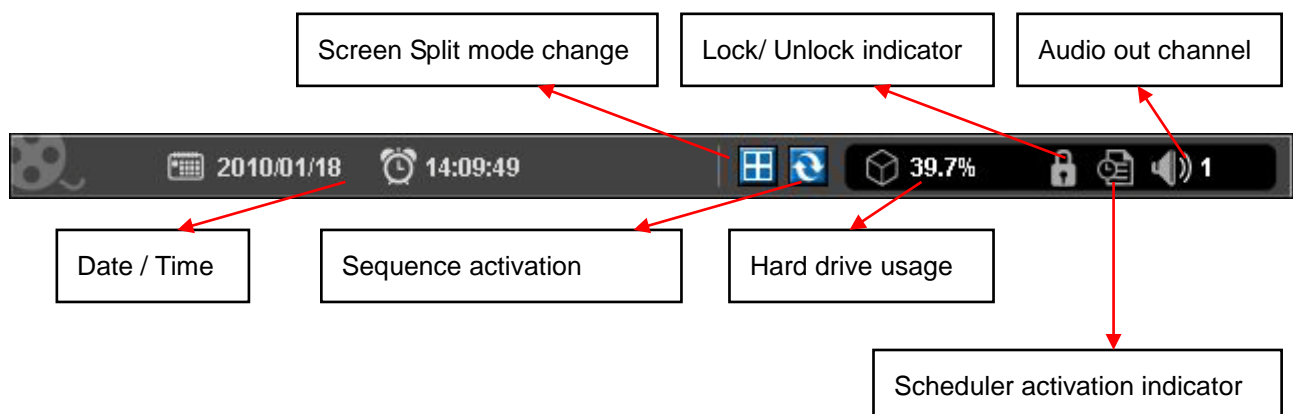
3) Live Popup Menu

User may bring up the Live Popup menu by right-clicking (mouse) anywhere on Live Screen. By using the Live Popup Menu, user can enter any configuration and settings immediately.
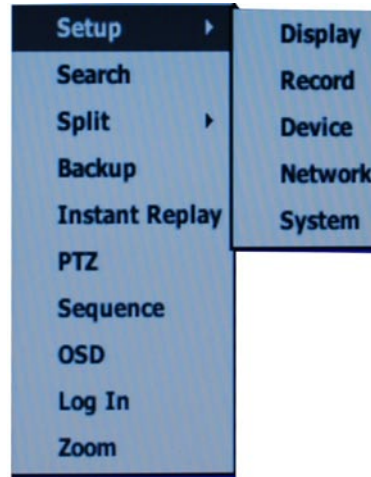
3-1) LIVE Mode Feature

1) Split

Modify Live View split screen.
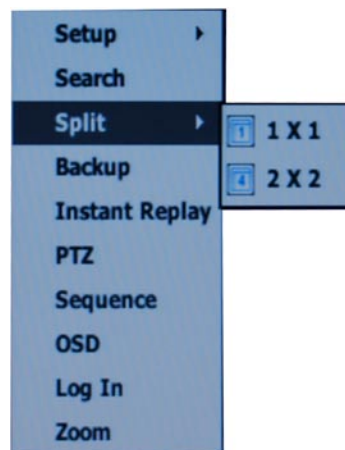
4CH   : 1/4 Split Mode

8CH   : 1/4/6/8/9 Split Mode

16CH : 1/4/6/8/9/13/16 Split Mode

2) Instant Replay

Instant Replay provides a very convenient method to catch the abrupt accident immediately. During live viewing, user can enter the playback screen directly and use related functions to playback.

3) PTZ (Pan, Tilt and Zoom)

Press 'PTZ' button to enter PTZ mode. For Menu setting, user may set it by pressing the button as displayed at bottom of window.

- User can set the direction of camera by using the arrow buttons.

Zoom +/-	Zoom in/out with mouse or play /backward buttons on the remote controller.
Focus +/-	Adjust the focus with mouse or slow buttons on the remote controller.
Iris +/-	Adjust the iris with mouse or ff/rew buttons on the remote controller.

Camera[0]: When select "Camera[0]" using mouse or "0" button on the remote control in PTZ mode, it can be changed to other camera
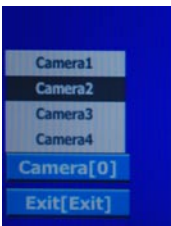
Setup[Menu]: When select "Setup[Menu]" using mouse or "Menu" button on the remote controller in PTZ mode, PTZ setup window will appear. User can set the pan and tilt speed, 32 preset name and tour sequence as well as dwelling time.

13

Preset [Enter]: User can enter the preset number using the keypad or "↵" button on the remote controller.

RUN: Enter preset number first, and press "Run" using mouse.

SET: Use the arrow buttons to set the direction, followed by preset number, and press "Set" to save this preset.

CLEAR: Enter preset number first, and press "Clear" to delete preset.

4) Sequence

Sequence Mode On /Off: Switches screens as set on Dwell time under Screen Setup

5) OSD

Display current DVR settings such as current date & time, System Lock Setting, HDD usage, Video Loss Check, Sensor ON/OFF, Motion Detection Check, Recording Status and Schedule Feature Usage information on GUI by pressing INFO button. Press INFO button twice to close this GUI.

※ GUI (Graphic User Interface): Display current status on monitor as images
※ OSD (On Screen Display): Display current status on monitor as character

6) Lock/Log In

Log off current user and lock the DVR unit from any further configuration until next Administrator logs in.

7) Zoom

Digital zoom (up to 2x) on live screen for selected channel and control the position by dragging the mouse.

3-2 SETUP Mode

Access Setup menu by right clicking on mouse button.

3-2-1 DISPLAY

Configure OSD, Main Display and Color Control settings.

1) OSD

User may configure Date Format / Time Format / Language / Alpha Blending / OSD / Information Bar options.
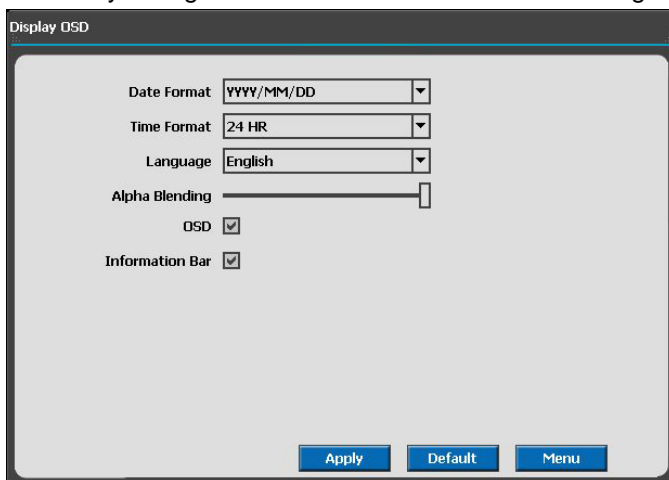
Date Format: Select from YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY format.

Time Format: 24HR – 24 hour military time format

               12HR(AM/PM) – 12 Hour separated by AM/PM format

Language: Select system language.

Alpha Blending: Adjust transparency of System Menu.

OSD : Turn OSD On/Off.

Information Bar: Turn Menu Bar information On/Off.

Default : Default all configurations back to Factory Settings.

Apply : Save current configuration.

2) Main Display

Configure Monitor output, Switching Dwell
Time settings. Monitor option is only available
for 8 and 16ch DVR unit.
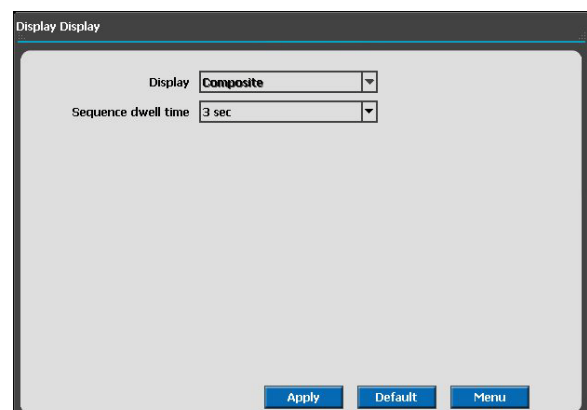
Monitor: Select monitor output between VGA and composite. The screen size will be optimized with the selected monitor.

Switching Dwell Time: Setup channels switching time.

3) Color Control

Adjust camera color display.
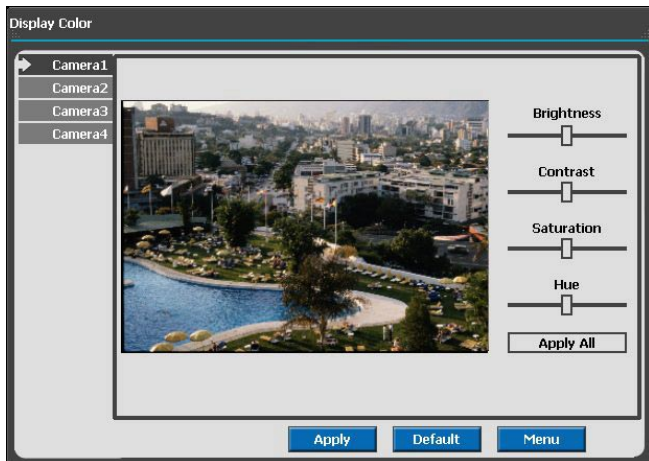
Adjust camera image by channels.

- Contrast: Adjust contrast of camera.

- Brightness: Adjust brightness of camera.

- Saturation: Adjust saturation of camera.

- Hue: Adjust color of camera.

3-2-2 Record

Configure Event In, Record, Group, Holiday settings.

1) Record

Setup the DVR recording variables and Scheduler.

[Scheduler Off]

Allow user to set normal recording and event recording individually.
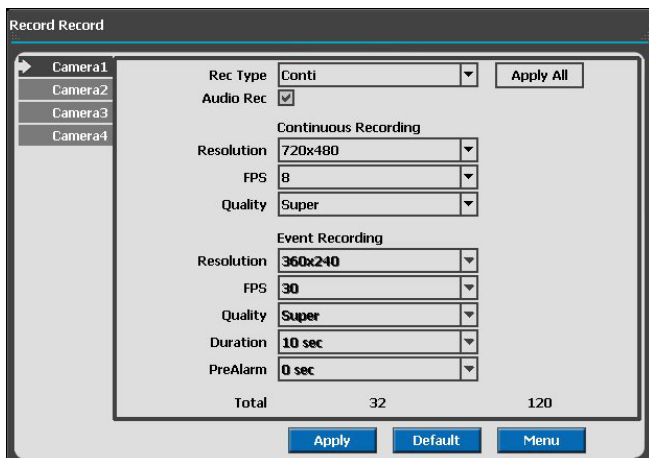
1) **Rec Type**: Select conti (continuous), event, C/E(conti and event) and none(not recording) recording.

2) **Audio Rec**: Enable/ Disable audio recording.

3) **Continuous Recording**:

   ① Resolution: Select recording resolution.

         -- CIF   : 360X240 (NTSC)/ 360X288 (PAL)

         -- 2CIF : 720X240 (NTSC)/ 720X288 (PAL)

         -- D1   :720X480 (NTSC)/ 720X576 (PAL)

    NOTE: D1 resolution = 2 x 2CIF resolution = 4 x CIF resolution

   ② FPS: Setup recording frame rate per channel.

      Total number of frames used cannot exceed:

         -- CIF resolution: 120fps (4CH) / 127fps (8CH) / 135fps (16CH)

         -- 2CIF resolution: 4CH : 60fps (2CIF) + 3fps (CIF)

                           8CH : 60fps (2CIF) + 7fps (CIF)

                        16CH : 60fps (2CIF) + 15fps (CIF)

         -- D1 resolution: 4CH : 30fps (D1) + 3fps (CIF)

                           8CH : 30fps (D1) + 7fps (CIF)

                        16CH : 30fps (D1) + 15fps (CIF)

    NOTE: D1 resolution = 2 x 2CIF resolution = 4 x CIF resolution

  For example (16 CH):

  Scenario: If user selects:

     CH1   --   D1 resolution : 2fps

     CH2   -- 2CIF resolution : 5fps

     CH3~16 -- CIF resolution: 3fps

     Total frame rates used in CIF= CH1+ CH2 +CH3~16

                                = (4 x 2fps) + (2 x 5fps) + (14 x 3fps)

                                = 74fps, which is less that 135fps

                                = Valid

   ③ **Quality**: Setup picture quality from **Super, High, Medium and Low.**

     NOTE: As quality gets higher, screen quality gets better. However, saving period gets shorter because the file size gets larger.

4) Event Recording

Event setup method is the same as Conti Recording method. Conti Recording and Event Recording can be operated simultaneously. When there is no event occurs, DVR unit will record under Conti recording mode and vice versa.

- Duration(sec): Set post event recording time. User can choose from **1~60** seconds.
- Pre alarm(sec): Set pre event recording time. User can choose from **1~5** seconds.

* Event recording has higher priority in recording. In C/E recording mode, DVR unit will follow continuous recording setup in normal condition and switch to event recording setup when event occurs.

* For convenience, user can use the 'Apply All' menu to apply the settings to other channels at once.

[Scheduler On]

Allow user to set recording weekly and reduce unnecessary time period of recording. In Scheduler window, days, channels and recording information for each channel are displayed at bottom of window.

<How to set the weekly scheduler>
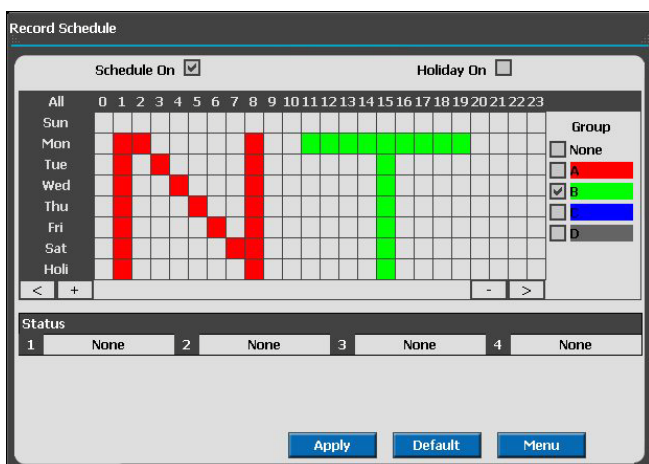
1. Tick 'Scheduler' to 'On'.
2. Use mouse to check group color and click time zone.
3. Press the time bar (UNLOCK first) to set the detailed time.
4. Using mouse to change the group of the selected area.
5. Check "Holiday" to activate 'Holiday' scheduler.

2) Group

With this menu, user can set the group using the scheduler. The settings are similar to "Record" menu.

In recording, Schedule recording has a highest priority. Therefore, once weekly scheduler has been activated,, user are not allow to record manually.

3) Holiday

User is able to setup the Holiday recording date manually.

4) Event In

User can setup sensor input and motion detection setup in the menu. User can also setup each channel individually. Each channel may be configured to M (Motion) / S (Sensor) / ✓ (Both)

For example:

Event Input	Event Ch	Record Ch
Sensor or Motion	Ch 1	Ch1 / Ch2 /Ch3

Event Input	Event Ch	Record Ch
Motion	Ch 4 or Ch5 or Ch6	Ch4

NOTE: Only Event 1 is allowed to select ✓ (Motion or Sensor), and other channels select "M" to trigger recording

Event Recording Summary:

	Event Input	Motion Detection	Sensor Setting
Motion recording	M	ON	OFF
Sensor detection recording	S	OFF	ON
Motion or Sensor Recording	✓	ON	ON

*Although user set Motion Detection and Sensor Setting to On in Event menu, if Event Input in Rec Menu is set to None, it will only detect the event but not recording.

3-2-3 Device

Configure and view Camera, Audio, Motion Detection, Alarm Out, PTZ settings

1) Camera

User may configure and/or view camera video type and general camera configuration.
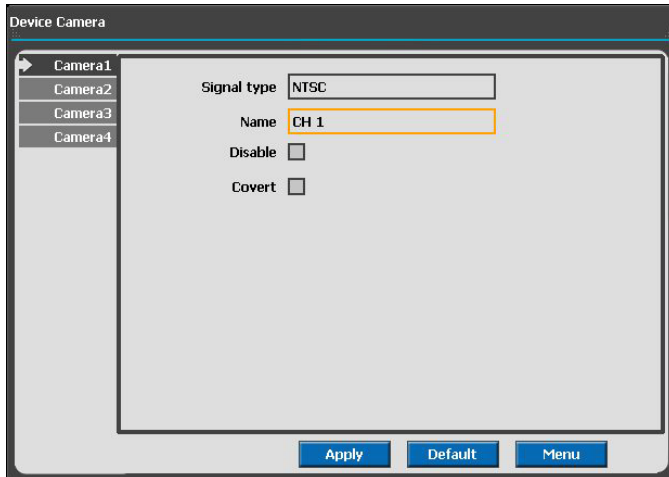
  Name: Define the camera title.

  Disable: Disable current camera. It is useful when camera input signal is weak.

  Covert: Hide current camera from Live view but does not interrupt recording.

2) Audio
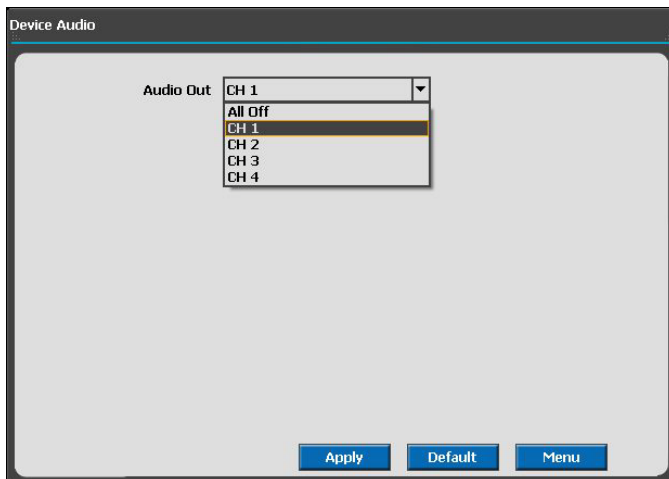
Audio Out: Select which audio output channel during Live View.

3) Motion Detection

Change settings for Motion Grid selection and Sensitivity Level
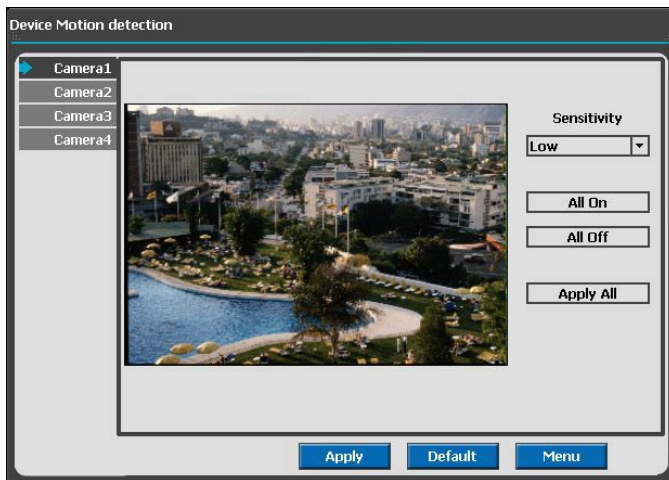
Sensitivity: Select motion detection sensitivity level

All On: Activate motion detection in all area.

All Off: Deactivate motion detection in all area.

4) Alarm Out

There are 3 alarm trigger types such as sensor input, motion detection and video loss. This setting is related to which trigger will activate the action such as Relay, Popup, and Buzzer Alarm Out. Each alarm trigger type has an individual Duration value.

4CH Alarm out OSD page

8/16CH alarm out OSD page

Duration Time vary from 5 seconds to 60 seconds

Sensor Type: Selectable option is N.O. (Normally Open) / N.C. (Normally Close)

5) PTZ

Configure Pan/Tilt/Zoom camera for control via DVR System and Remote client software

Driver: Select correct protocol for DVR unit to communicate with PTZ cameras.

Please contact PTZ camera manufacturer to find out the correct default protocol.

Driver	Baudrate
PELCO D type	9600~2400
PELCO P type	2400
PANASONIC	2400~19200
ORIENTAL	2400(Fixed)
LPT-A100L	9600(Fixed)
LG-SD110	2400~19200

6) Controller

Setup the ID of remote control. If there are few DVRs present in one location, user can control each DVR separately by using different remote control ID on each DVR.

Use the ID setup and number key to set the ID of remote control on the remote controller. User may check the ID by pressing the remote control key. The ID should be the same between the DVR and remote control.
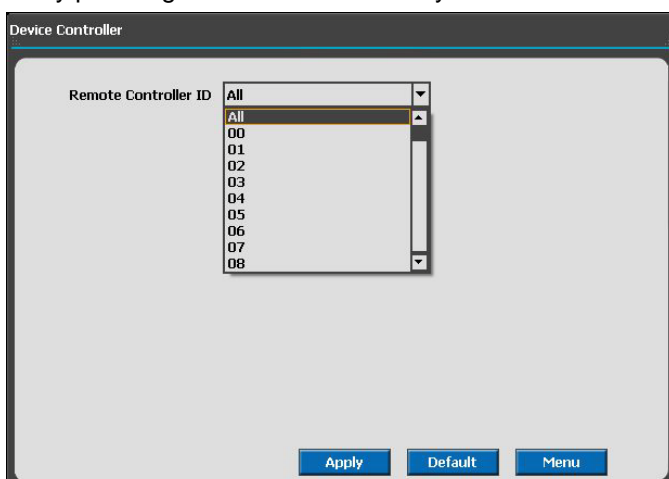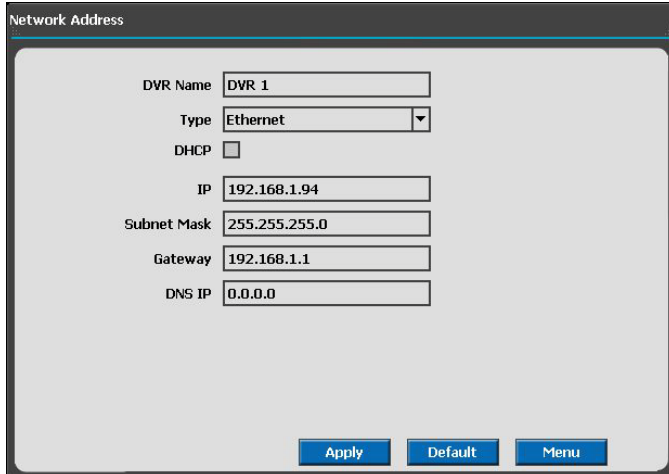
3-2-4. NETWORK

Configure and view Status, Address, Port, DDNS, E-mail settings

1) Address

Configure Network information for Remote client connection

DVR Name: Assigned a title for the DVR unit.

Type: Choose Ethernet network environment.

DHCP: Set to use DHCP or not (On/Off).

   Note: Please consult your network administrator for DHCP support.

IP: Set IP Address

Subnet Mask: Set Subnet Mask address

Gateway: Set Gateway address

DNS IP: Set DNS address

2) Port

Setup 4 individual ports for remote watching, searching, setup and web browser viewing.

Please refer to "APPENDIX. D   Connection Port" to know how to open the port in your louter

3) DDNS

DVR unit supports the automatic DDNS service using DYNDNS server.

4) Status

Display network information such as how many connections and what is the action of each connection. This allows user to have better security management.

Connected IP: Display all remote login IP address.
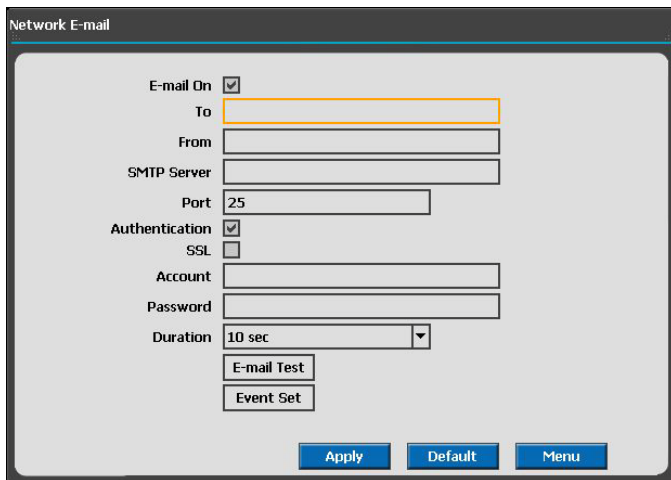
Watch User: Display number of connections for live viewing.

Search User: Display number of connections for playback.

Setup User: Display number of connections for DVR setup.

Note: Total maximum connections at the same time: 4 users

5) E-mail

E-mail ON: Enable / Disable event E-mail notification function

To: Recipient Email address

From: Sender Email address

Port: SMTP server port

Authentication: Check if SMTP server requires Authenticate Sender information

SSL: Check if SMTP server requires SSL
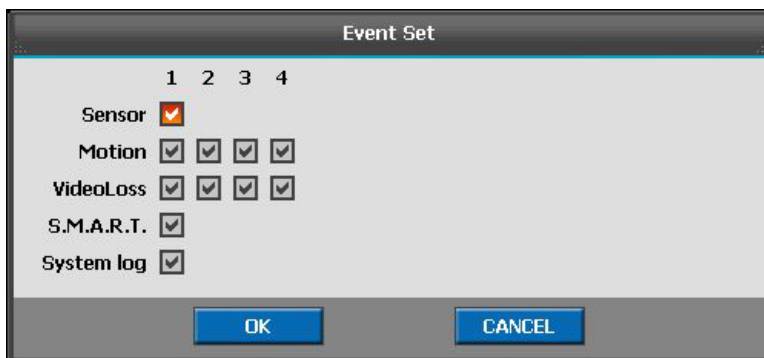
Account: Sender email login ID

Password: Sender email login password

Duration: Set sends e-mail duration when event triggered

E-mail Test: Send testing e-mail to recipient Email address

Event Set: Set event e-mail type

NOTE: Due to one sensor hardware limitation for 4/8/16CH, only Channel 1 is allowed to select sensor type.

3-2-5. SYSTEM

Configure and view system Date/Time, User Authority, Storage, System Log, Firmware settings

1) Date/Time

Time Zone: Setup current time zone. This must be set correctly if you using the NTP function.

Daylight Saving Time: Enable day light saving time automatically.

NTP (Network Time Protocol) Server: This function is to change the time of DVR automatically via network.

Press 'Sync' button to synchronize time with Time server

NTP Check: Set automatic network time sync schedule. (None / 12Hours / 1day / 2days / 3days / 1 week)

2) User Authority

Setup user authorities such as Setup, Search, Backup, PTZ, Network and camera control individually.
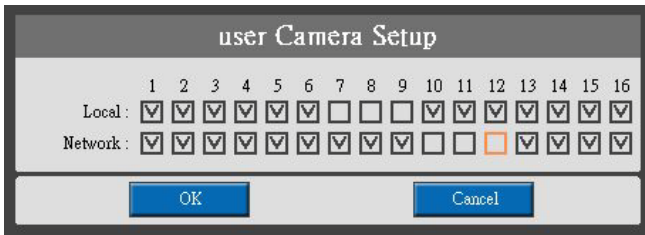
ID: Use virtual keyboard to input user ID

Password: Setup user login password
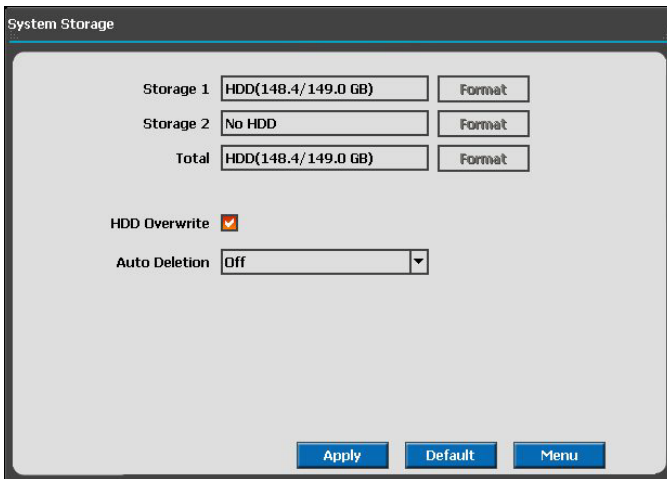
Camera: Setup which cameras are allowed to view for login user

3) Storage

Storage 1: Display the information and usage of the hard disk drives.

NOTE: Press 'Format' button on each HDD will only format that particular HDD.

Total: Display Total HDDs being used for the product.

NOTE: Press 'Format' button on here will format all HDDs drive.

HDD Overwrite: Enable when user wants to continue recording if HDD is full.

Auto Deletion: Select the holding period of the data(1 day~3 month). If you choose 'OFF', the DVR will keep the maximum data according to the HDD capacity.

4) S.M.A.R.T

S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology). It was created to monitor the disk status.

S.M.A.R.T:

Check Day: Set HDD checking data

Boot message: Set alarm output condition for boot error

Temperature:

Check time: Set the duration time to check HDD temperature

Limit: Set alarm output condition of HDD temperature

Alarm out: Set the alarm output method for S.M.A.R.T

S.M.A.R.T(error/Test): show the information for boot error

Temperature : Show the HDD temperature

5) System Log

User may view all System administration log from Setup ◊ System ◊ System Log

Export: Allow user to backup all system log data to USB pen drive.

6) Firmware

Allow user to view current DVR unit firmware version, upgrading firmware, Export or Import and Default DVR Configuration.
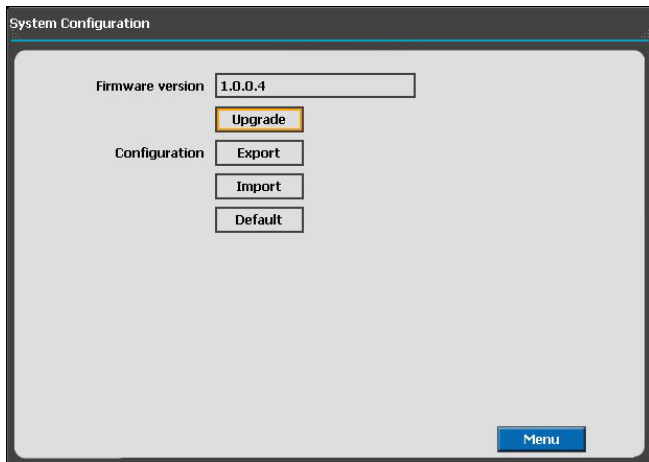
Upgrade Steps:

1. Copy the upgrade file to the USB pen drive(file will be:xxxxx.fwr format)
2. Connect USB pen drive to the DVR unit front panel
3. Enter menu→system→firmware page and press "Upgrade" button, then select upgrade file from USB pen drive.

Note: The Upgrade process takes 6~10 minute. Do not interrupt the upgrade procedure!

※ DVR will reboot automatically after upgrading. DO NOT REBOOT MANUALLY!

7) Shut Down

You may safely shutdown the DVR by entering Setup → System → Shutdown.

Note: DVR will lose 1 second of the recording data if power down the DVR unit directly

3-3 Search mode

Search mode consists two different modes of searching. The video data can be searched by Time or Event.

3-3-1. Search Selection Type

1) Time Based search selection
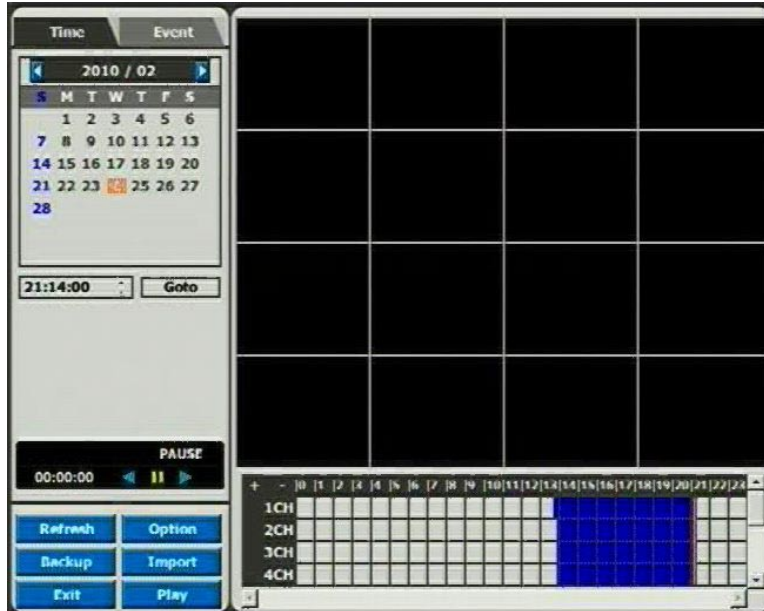
    1. Select the date you wish to view by selecting a Date from Calendar

    2. Select the time you wish to view by selecting a time from Time Line, or click " + " or " - " to get detailed

time line

    3. Preview panel above the time bar will show the preview of the selected video

    4. Choose 'Play' to play in full screen mode. User can control the playback speed in here.

    Refresh: Reload all data list.

    Option: Select Default search options such as time, type, and Deinterlacer
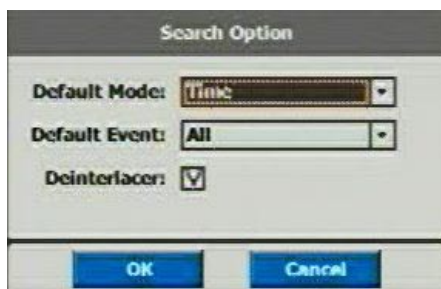
    Import: Import recorded data from external USB device

32

Backup: Backup recorded data to external USB device
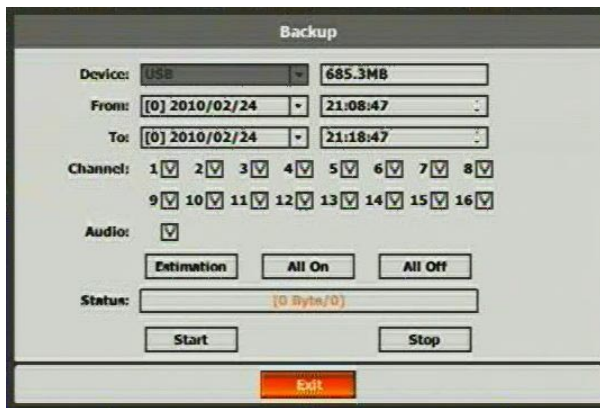
◆Select backup period, channels and press

"**Estimation**" to calculate file size.

◆Press "**start** "to start backup recording data

◆**Play:** Load playback data to full screen mode.

◆**Exit:** Exit to Live video mode
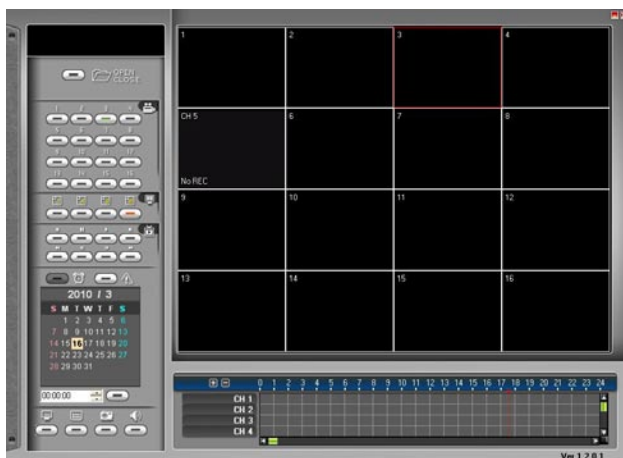
Backup player:
While making backup, the player program will be written into the USB stick as well

2) Event Based Search Selection
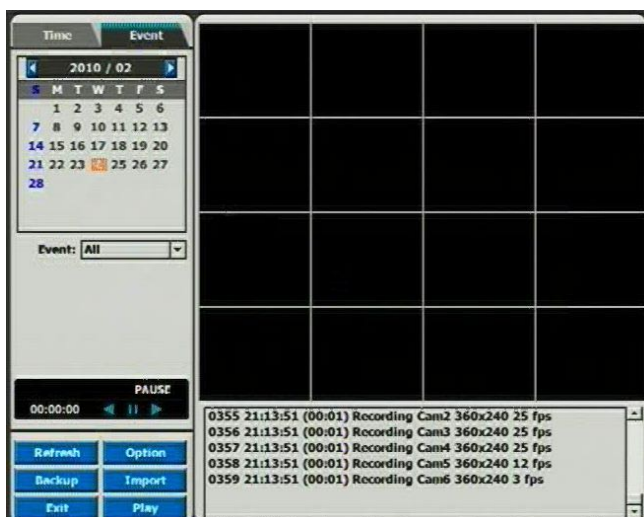
1. Select search date from calendar

2. Event log will be displayed according to the chosen date

3. Preview panel above the Event Log will show preview of selected video

4. Event log can be searched by the event type:
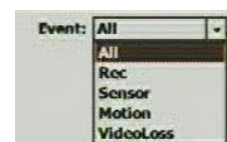
3-3-2. Play Mode
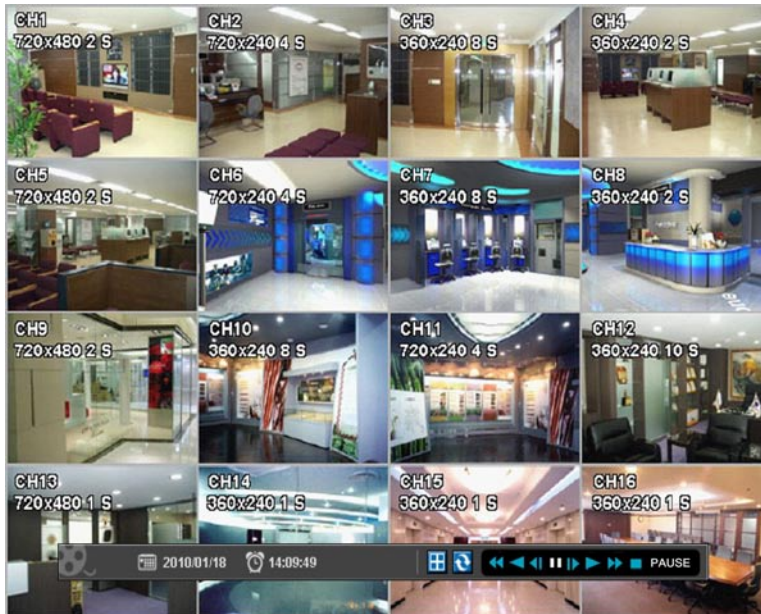
1. Split Screen

2. Sequence

3. FB (Fast Rewind): ×2, 4, 8, 16, 32, 64 times faster

4. Playback: Rewind in normal speed

5. SB (Slow Rewind): x1/2, 1/4

6. STILL (Pause) / play Frame by frame

7. SF (Slow Forward): x1/2, 1/4

8. Play: Forward in normal speed

9. FF (Fast Forward): FF×2, 4, 8, 16, 32, 64 times faster

10. Stop: Stop playing and returns to LIVE Screen.

11. Status information

By Right-Clicking anywhere on Play mode Screen, user may view the Live Popup Menu.

4. Remote software

This Remote Client software program allows user to connect and operate the DVR unit from any place over internet via PC.

CLIENT PC REQUIREMENT

CPU and VGA are critical for playing recorded file and recording performance. Therefore, user must use the recommended PC hardware to avoid experiencing low image quality or unable to view live image issue.

※ Client S/W requires large amount of CPU to send and receive data. Therefore, it is highly recommended not to run other application program (such as antivirus software) at the same time.

▶ Recommended Client PC Specification:
- CPU: Intel Core2 Due CPU or higher
- RAM: 1GB or higher
- VGA: Memory 256MB or higher
    - LAN : In 10/100 network environment, 100Mbps or higher environment
    - DirectX9.0 or higher,

▶ Minimum Client PC Specification
- CPU : Pentium Ⅳ 2.0GHz or higher
- RAM : 512MB or higher
- VGA : Memory 64MB or higher
    - LAN : In 10/100 network environment, 100Mbps or higher environment
    - DirectX9.0 or higher,

In 'Favorite mode', CPU occupancy will increase according to the number of remote connections.

▶ Recommended VGA display card
 - Chipset from nVIDIA: GeForce 4- Higher than 64MB
 - Chipset form ATI: Radeon - Higher than 64MB
 - Chipset from MATROX: G450 - Higher than 64MB
 - Chipset from Intel: Higher than 64MB

Fail to meet these requirements might cause the program errors, low screen quality like black & white screen, unable to playback in proper 256 bits color.

4-1. Installing Client Program

1. Execute the software on CD
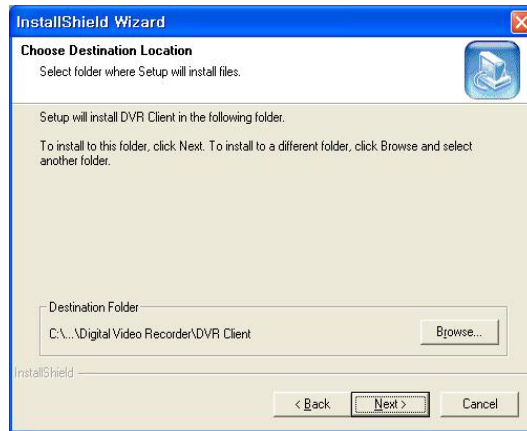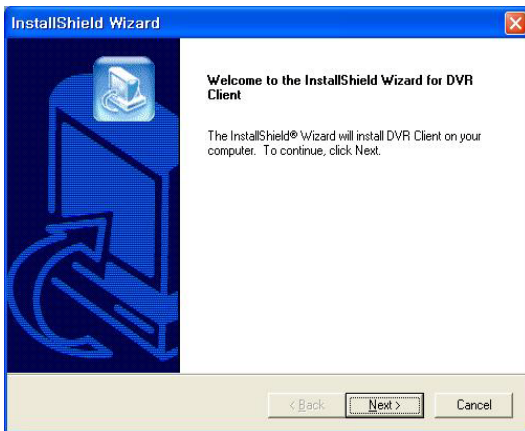
2. Select destination folder to install the program
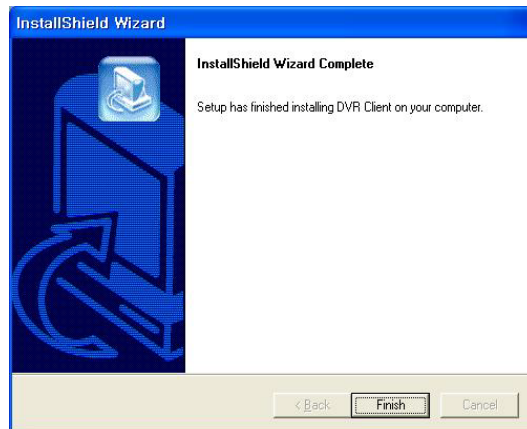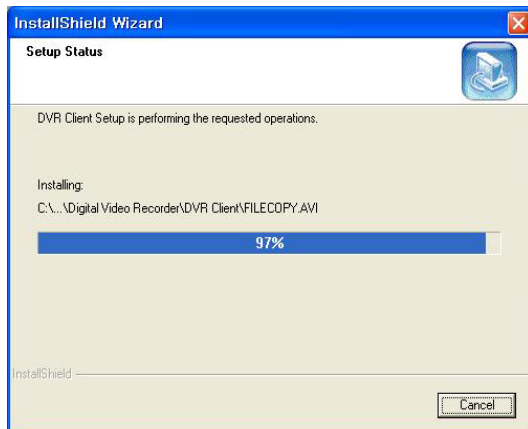
3. Finish Program Installation

4-2. How to Use remote Program

Execute the client software and followed by correct password (**default is null**).
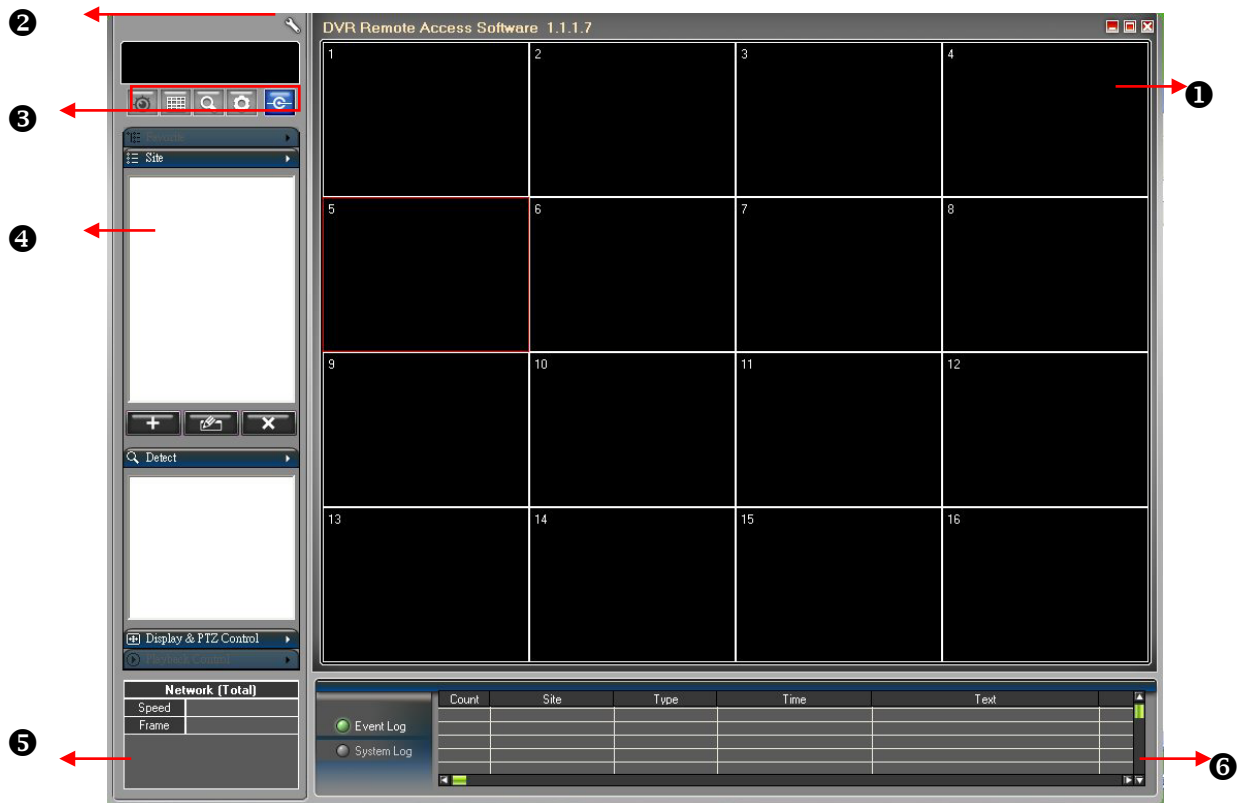
1. Display panel to show live and playback images

2. Setting button:
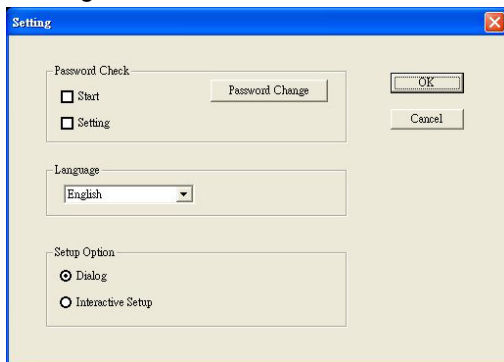
Password Setup: Allow user to change the password settings.

Start – Require password input when remote software startup.

Setting – Require password input in order to enter system setup.

Dialog – If you choose the 'Dialog', You can set the DVR using dialog windows.

Language – Choose the language of remote software

3).

	WATCH MODE : Live screen.
	FAVORITE MODE : Connect to multiple DVR (up to 64)
	SEARCH MODE : Playback Screen
	SETUP MODE : Setup the connected DVR
	Connect or Disconnect the connected DVR

4).

Favorite User may use this feature to setup a list of IP Addresses which frequently use for your convenient use.

Site: Display the DVR list you want connect.

Add: Add new IP Address.

Edit: Edit IP Addresses and other connection information on the list.

Delete: Remove saved list.

Detect: Detect all DVRs which connect to same router.

Display & PTZ Control: Change the control window after connection established.

4-2-1 Display & PTZ Control:

Allow user to display and control the PTZ cameras.
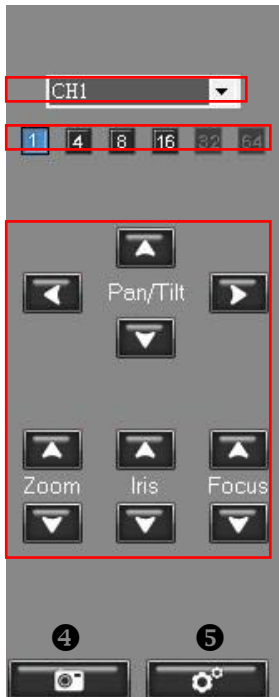
1. Channel selection

❶

2. Display mode selection

❷

3. PTZ control: Control the PTZ camera.

4. Snap Shot: Save a snapshot with JPG or BMP format.
Refer to 5-2-6.

❸

5. Option: Enter setup setting.
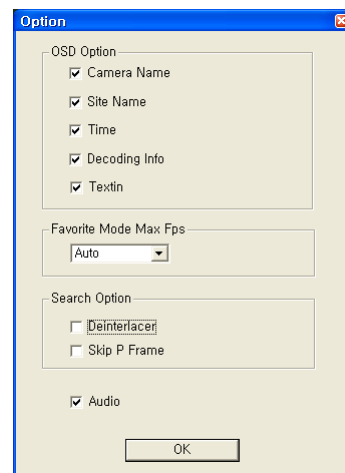
OSD Option: Turn OSD On/Off on live viewing.

Favorite Mode Max Fps: Adjust the maximum frame rate individually upon 'Favorite' connection. If
'AUTO' is chosen, the program will choose the optimum rates based on the PC and network speed.

Search Option: Select the search option

   Deinterlacer: Remove the tail when playing in D1 (720X480 or 720X576) resolution and low frame rate
(below 10 frames per second).

   Skip P Frame: Use narrow bandwidth network such as PSTN to makes possible real time playback by
skipping the P frame.

Audio: Enable sound on/off.

5).
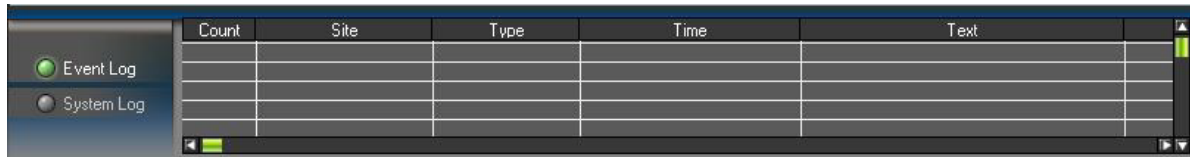
Display the network speed and frame rates per channel.

Site mode – Send up to 7.5 frames per second on 16 channel screen in Watch mode
 and 30 frames per second on 1channel screen.

Network (Total)	
Speed	
Frame	

Favorite mode – Send 30 frames per second in each channel. However, it is depend on the network speed and PC computing power.

6).

Select 'EVENT' to display all event logs.

Select 'SYSTEM' to display all system logs.

EVENT Log: Display motion detection, sensor, text in etc.
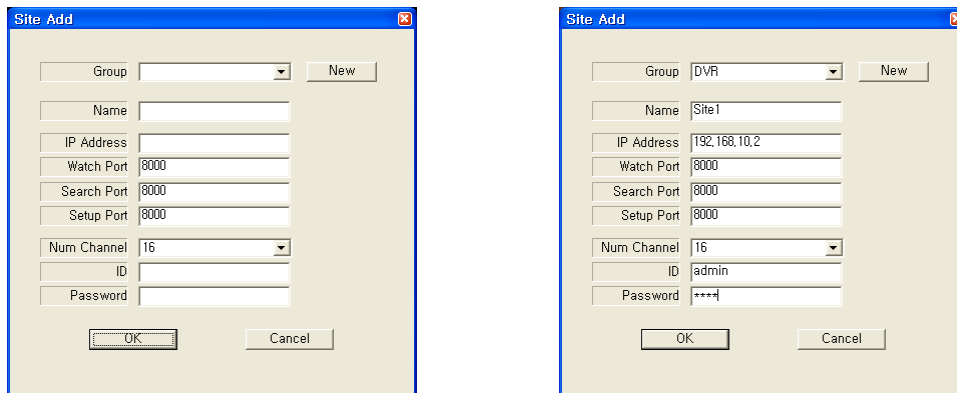
SYSTEM Log: Display DVR time change, DVR Power Off etc.

 Note: All logs data are retrieved from remote software, not from DVR unit.

4-3. Site - Connecting the DVR

Click 'Add' button at lower right corner on initial screen to add DVRs.

Group: Setup group of DVRs. User can choose either the existing group or create a new DVR Group with
'New' button.

Name: Create the name of the DVR.

IP Address: Set the IP address of DVR.

Port: Set the port number of DVR.

Num Channel: Set numbers of exact DVR channels what you want to register.

ID: Enter user ID.

Password: Enter DVR password.

Another method to add the DVR is to use the 'Detect' function. In 'Detect' window, it shows all the DVRs which connected in the same network. Choose any IP and click the 'add' button to add the DVR to the 'Site' list.
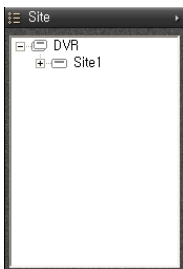
Choose the DVR on the **'Site'** list and click **'Connect'** button or drag to the main screen. User will see the live screen of the selected DVR.

User can connect to many DVR at the same time by choosing **'Favorite'** button, and also make the favorite DVR group.

4-4. Favorite – multiple DVR connection

In Favorite Mode, User can make the favorite multiple connection lists by pressing the 'Add' button or dragging from the 'Site' lists.
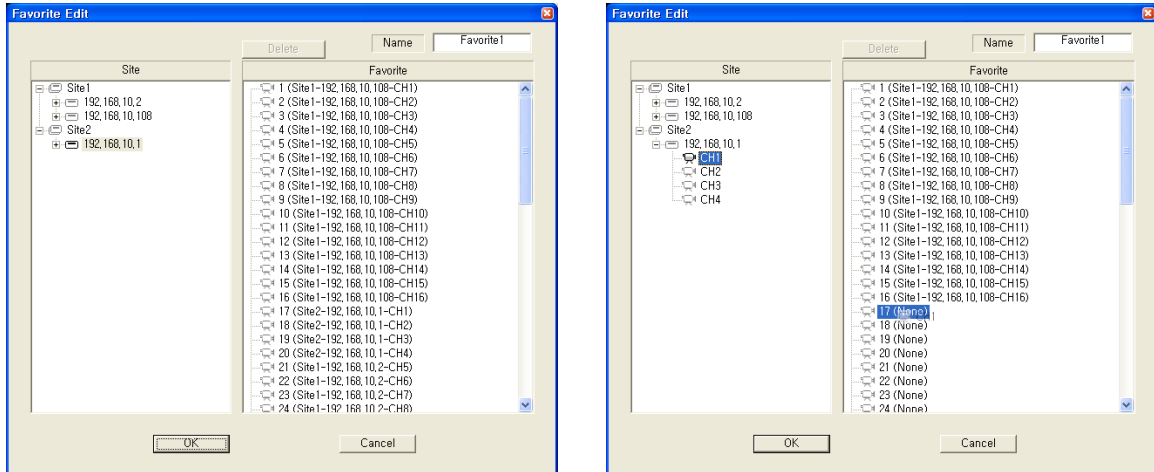
If you press the 'Add' button in Favorite Mode, the upper window will appear. The left side of the window shows the DVR list what you registered in site menu and the right side of the window shows the Favorite list which you want to edit.

If you want to make the Favorite list, drag and drop the wanted DVR from the left list to the right channel number and the selected DVR will be registered to the Favorite list. And also you can register the individual channel not the whole DVR.

After making the Favorite list, set the list name and press the 'OK' button to save the list.

If you press the connect button after selecting the Favorite list, the below window appears and you can watch simultaneously up to 64 channels.

NOTE: This favorite mode only can be adapted to the 'Watch' mode, not a 'Search' mode and 'Setup'

mode.

You can register the DVR or individual channel to the Favorite list directly not to make the list. You can just drag and drop the wanted DVR or channel from the right window to the wanted left channel. It will automatically connect to the selected DVR or channel.
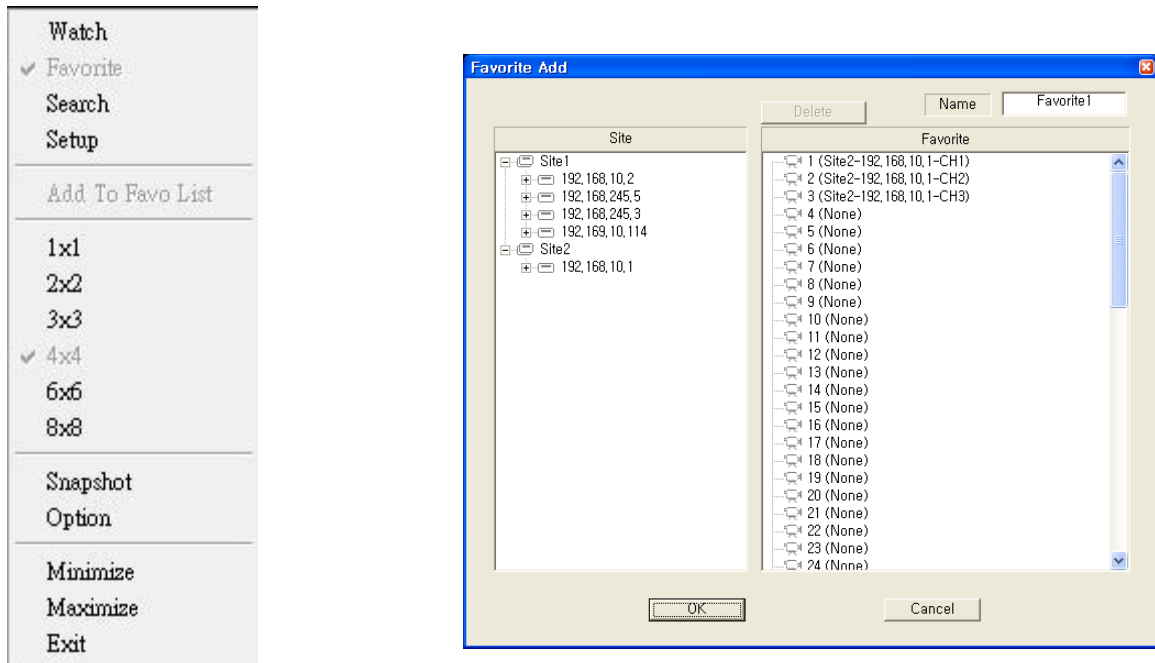
If you click the mouse right button from the upper screen and select the 'Add To Favo List', the favorite editing window appears and you can add the new connection to the list.

4-5 SEARCH – Playback

User will enter playback mode by choosing 'SEARCH' button after connection.

After selecting 'Control' button, control panel will appear as below:
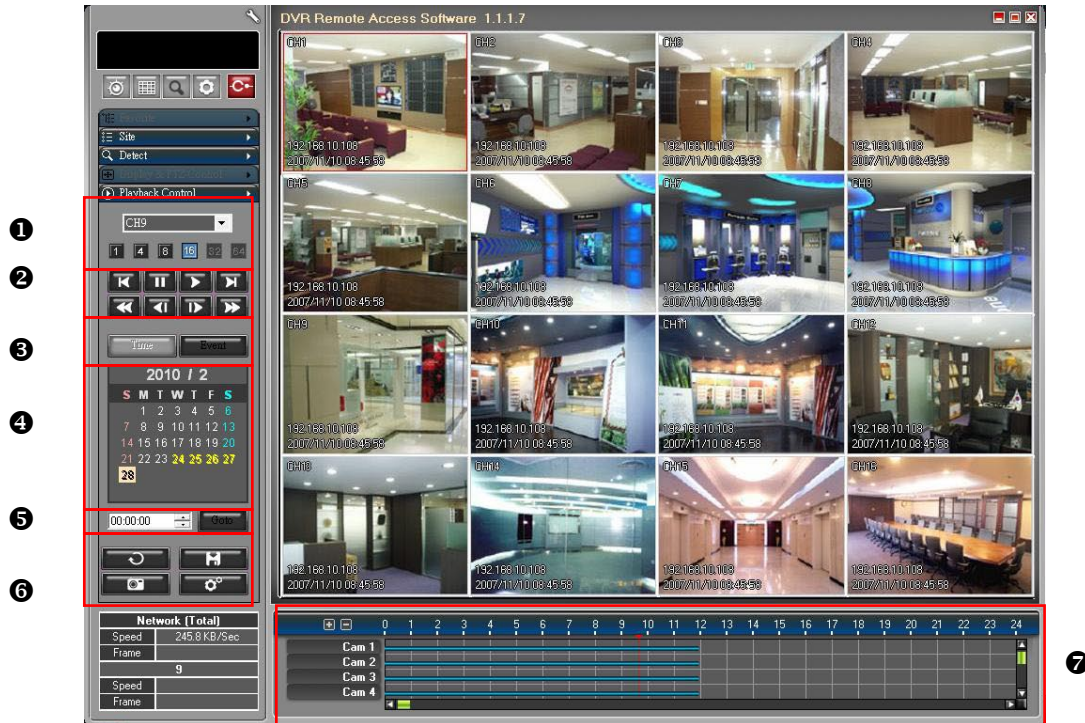
1. Channel and display mode selection

2. Playback speed control buttons

	Go to the previous image
	Pause playback
	Normal playback
	Go to the next image
	Fast rewind. (1x, 2x, 4x, 8x,16x, 32x, 64x faster)
	Rewind slowly.(1/2x,1/4x slower)
	Forward slowly.(1/2x,1/4x slower)
	Fast forward. (1x, 2x, 4x, 8x,16x, 32x,64x faster)

3. **Time:** Search by hour.

   Event: Search by event file from event list.

4 Calendar: Select desire date to playback video clip. When you choose the date, all the lists will display in time bar window. If you choose 'EVENT', you can search the event (Sensor Input, Motion Detection etc.).

5. Time Search: Go to the specific time directly.

6.

  : Update all information.

  : Backup image   into PC
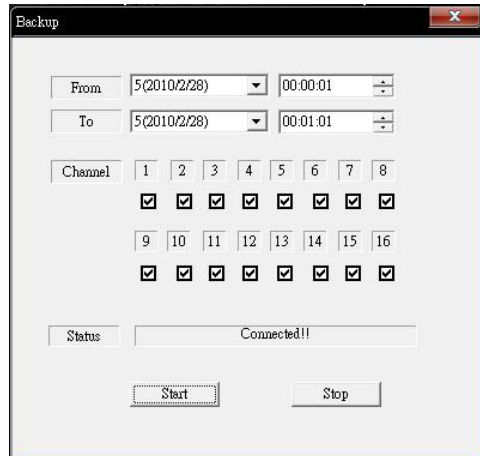
To backup, select From and To time, channels and click 'Start' to begin. It will start sending the file to the PC and all information be displayed. After sending the file, choose the filename and folder.

  : Capture Live or Playback image.
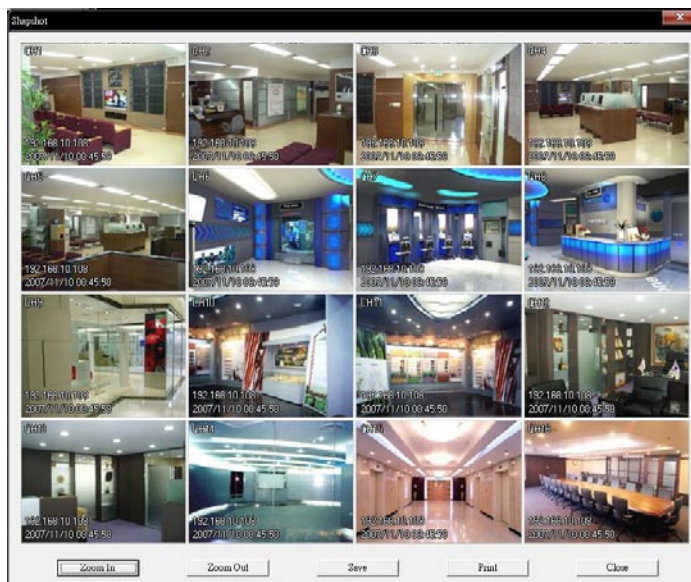
Zoom In: Allow user to enlarge the image up to 4 times.

(Left click and hold the mouse button in order to move the image around.)

Zoom Out: Allow user to reduce the image by ½ times.

Save Image: Save image as picture (bmp or jpg) format.

Print Image: Print still image through printer.

Close : Close Image Dialog window.

[icon] : Modify remote software settings.

OSD Option: Turn the OSD On/Off on live viewing.

Favorite Mode Max Fps: Adjust maximum frame rate individually upon 'Favorite' connection. If 'AUTO' is selected, the program will decide the optimum rates based on the PC and network speed.

Search Option : Modify the search option.

   Deinterlacer: Remove ghost image when playing with D1 (720X480 or 720X576) resolution and low frame rate (below 10 frames per second).

   Skip P Frame: Check when in narrow bandwidth network environment such as PSTN. It makes it possible to real time playback by skipping the P frame.

   Audio : Turn audio on/off.
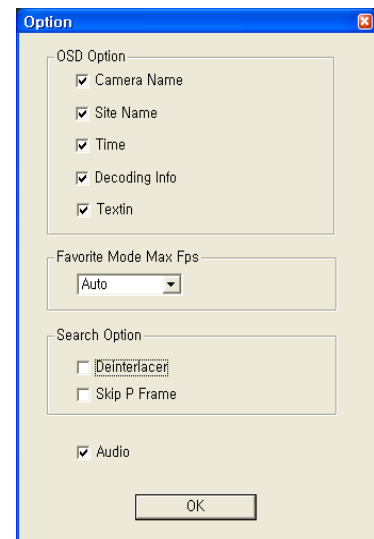
7. Displays recorded files in graphic bar. User can playback directly by just one click on the recording bar.
- Blue color: Normal Recording file
- Red color: Event Recording file.

Press "**+**" or "**-**" on the left-top time bar to get detail recording data.

When 'EVENT' is selected on Calendar window, the following event lists will appear. User can playback by choosing the event.

Count	Site	Type	Time	Text
1	test	Motion1	2010/02/26 12:05 02 (00:06)	
2	test	Motion1	2010/02/26 12:05 11 (00:09)	
3	test	Motion1	2010/02/26 12:05 21 (00:06)	
4	test	Motion1	2010/02/26 12:05 32 (00:16)	
5	test	Motion1	2010/02/26 12:05 55 (00:04)	

Left click on the mouse will allow playback in full screen mode. Click twice to return to previous screen.

4-6 SETUP – DVR Remote Setup

User can modify the preferences of the DVR unit remotely. Click 'SETUP' button to set up the DVR remotely and user will see the identical setup GUI of the DVR.
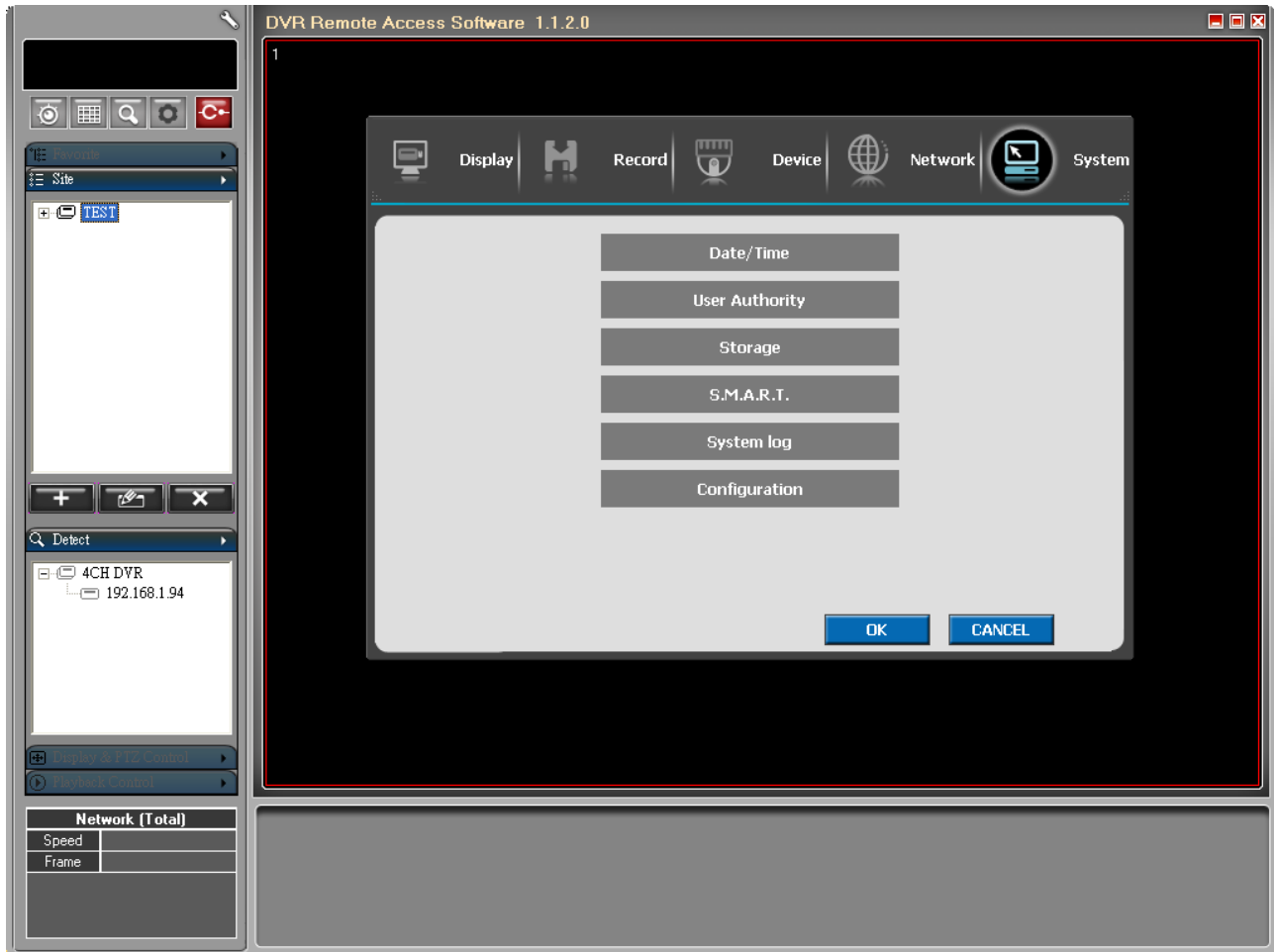
4-7 Web Browser Monitoring and Playback

DVR unit allows user to remote viewing via IE browser. After typing the IP or domain address at the address bar in IE browser, please enter the user ID (admin or user) and Password for the DVR unit. Hit " ⬤ " button to begin remote viewing or hit " ⬤ " button to playback image.

⬤🕐 :time search

⬤⚠ :Event search

⟳ :Refresh time bar

▤ :Option

📷 :Snapshot

⬔ :AVI Save
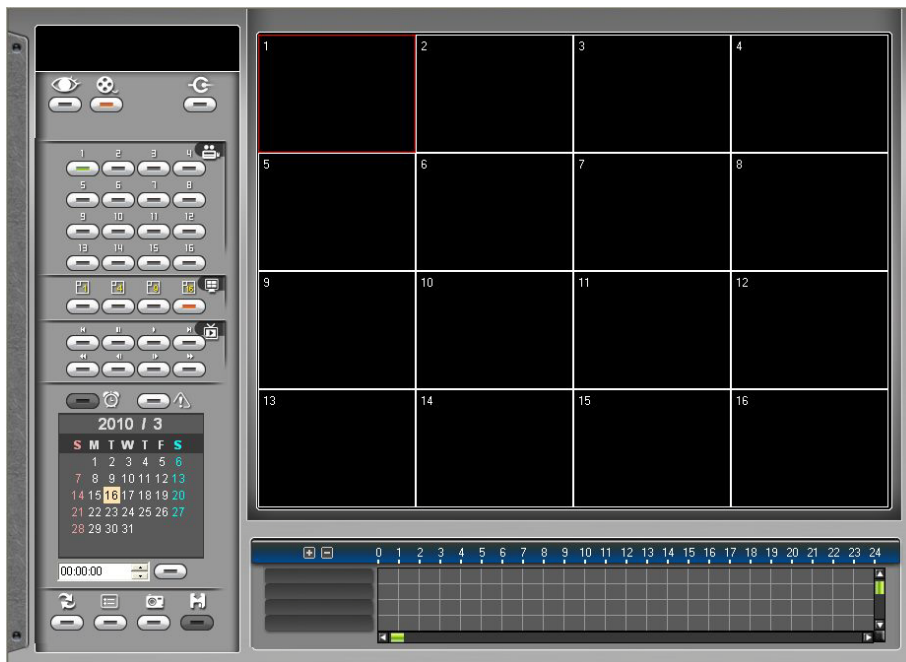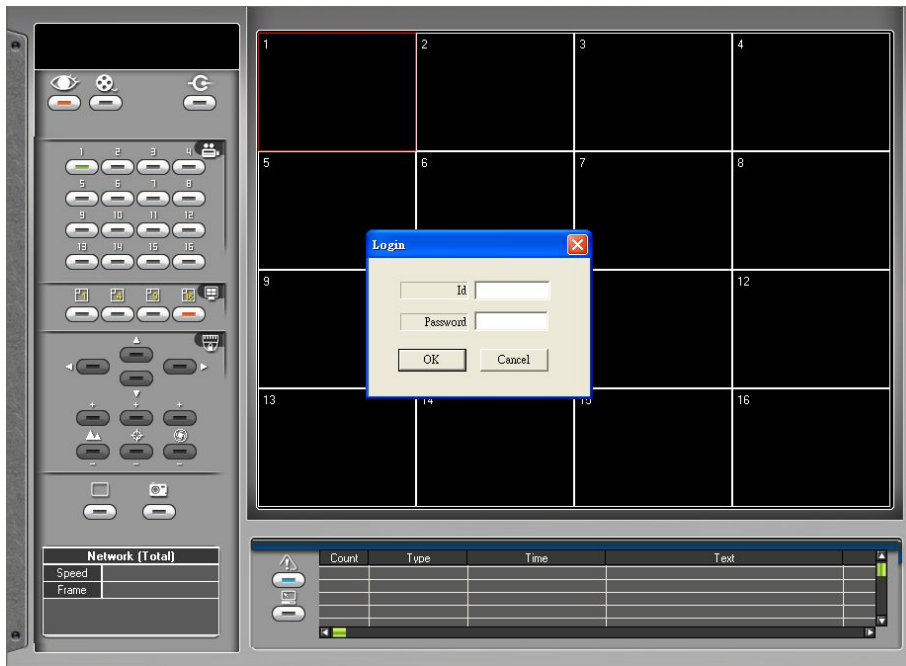
User can monitor /control the PTZ camera / Search / backup by using the web browser

4-8 Mobile Phone Viewing

DVR system allows user to view live image via 3G mobile phone.

1. Enter DVR IP address on the mobile phone browser
   with http:// ip address :port /mobile.html format.
   For example:http://122.147.154.249:8001/mobile.html , which
   8001 is referred to DVR web port
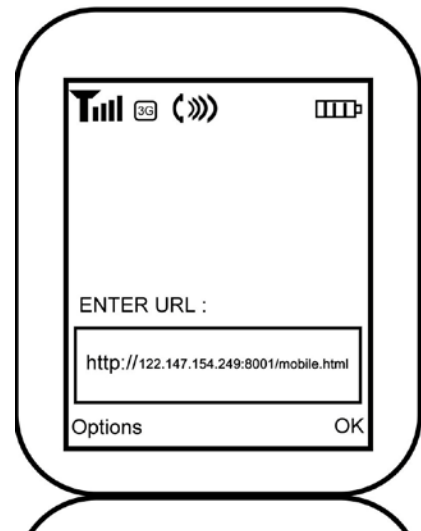
2. Enter DVR system ID and Password. Select camera channel and
   hit "Login".
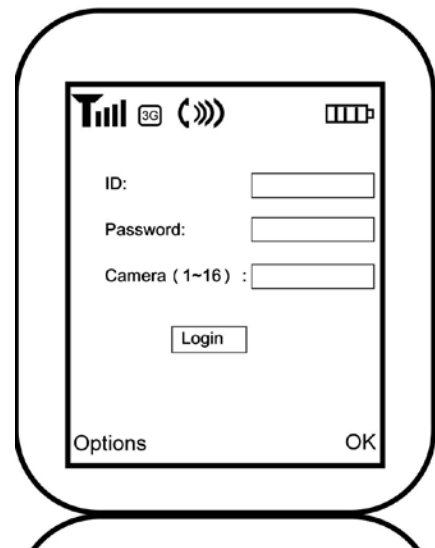
3. Please allow 3~5 second for Mobile phone to buffer the image.

NOTE:

1. **Mobile phone image download speed is depend on mobile
   carrier download bandwidth and signal performance.**
2. **The maximum download speed is 1 FPS**

4-9 Network Firmware Upgrade

After installing the client software, you can find the 'NetDownloader Program' in the window programs (Start -> Programs -> DVR Client -> NetDownLoader). Please execute the 'Net Downloader Program' to upgrade the DVR firmware.
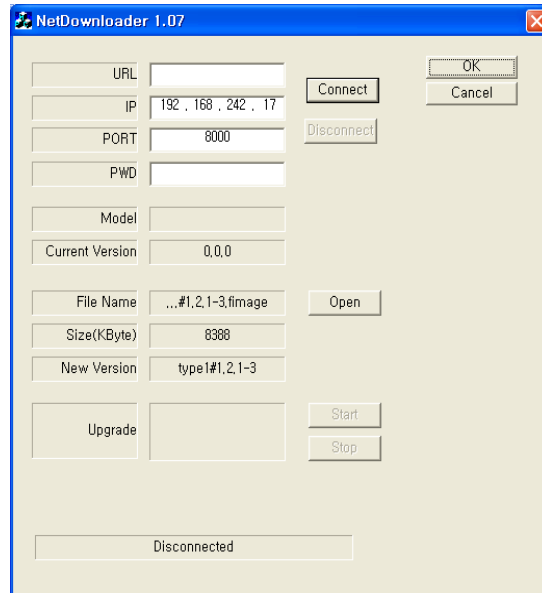
After entering the IP and password of the DVR, click 'Connect' button to communicate with your DVR unit. You can check the model name and the current version. If you cannot see the model name and current version, you should check the network and try again.
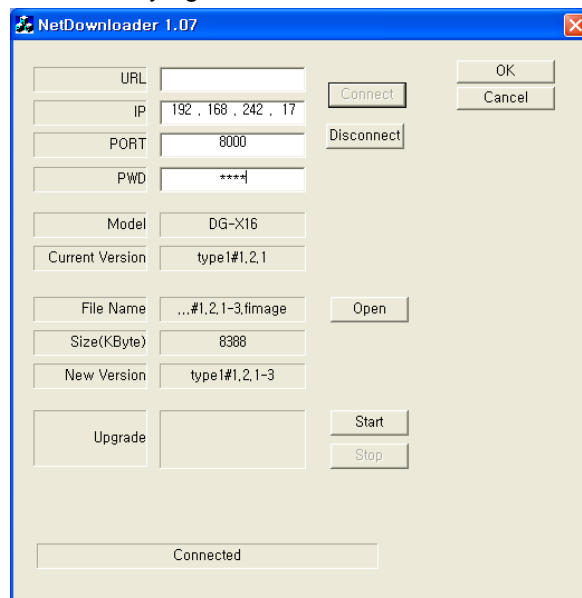
After connection established, click 'OPEN' button on the 'NetDownloader' program and select the update file.

Press 'START' button to begin the process. You will see the below download window on the DVR screen.
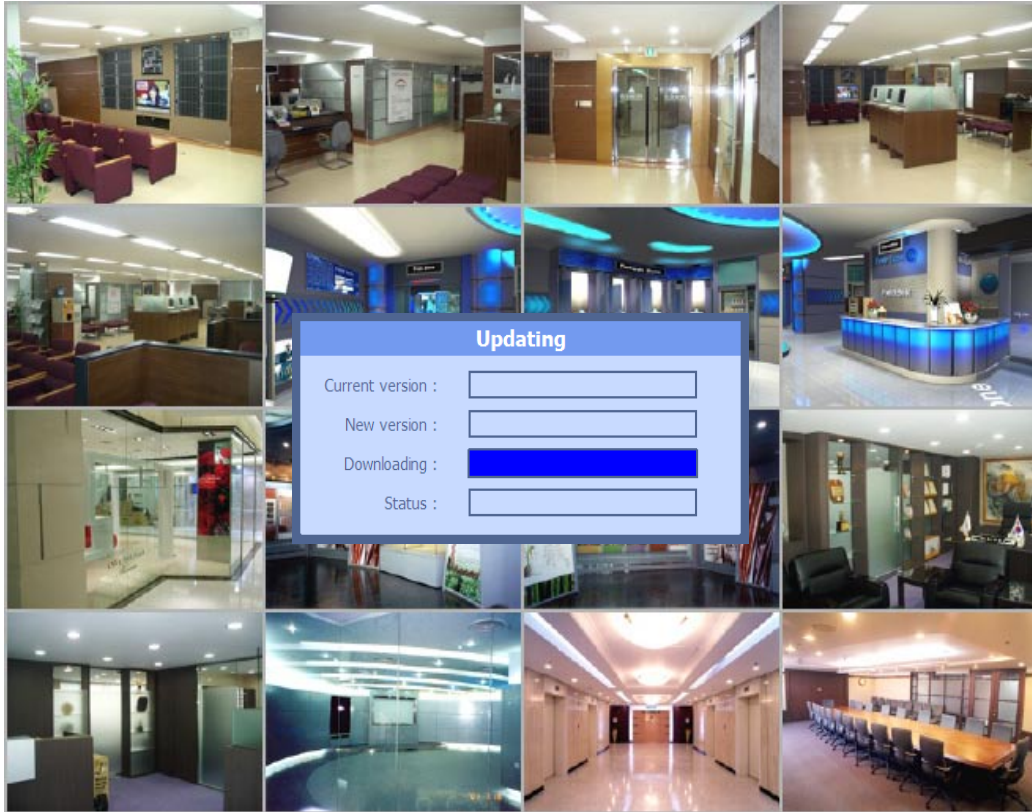
☞ **WARNING!!!**
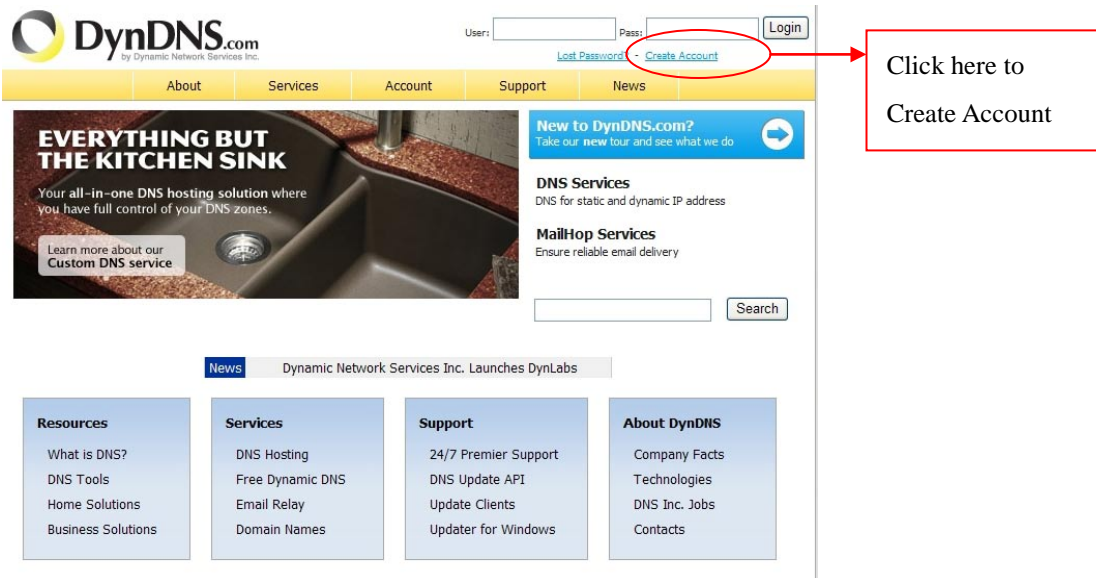
DO NOT INTERRUPT THE DOWNLOAD PROCEDURE. IT WILL DAMAGE THE DVR UNIT IF FAIL TO DO SO.

※ **DVR WILL REBOOT AUTOMATICALLY AFTER DOWNLOAD COMPLETED. DO NOT REBOOT MANUALLY**!

APPENDIX A DDNS SETUP

1. Registering DDNS (Dynamic Domain Name Server) in Dyndns.com

 A. Register your DDNS host in Dyndns website (http://www.dyndns.com)

Click here to

Create Account

Create your user information.

Tick the checkbox

Create Account

You will see this confirmation page

B. Complete Registration:

Your DynDNS Account 'dyndtest' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:

https://www.dyndns.com/account/confirm/Spwn7yUgskorCZUS9qk6Vg

Click this link to confirmation

Our basic service offerings are free, but they are supported by our paid services. See http://www.dyndns.com/services/ for a full listing of all of our available services.

If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.
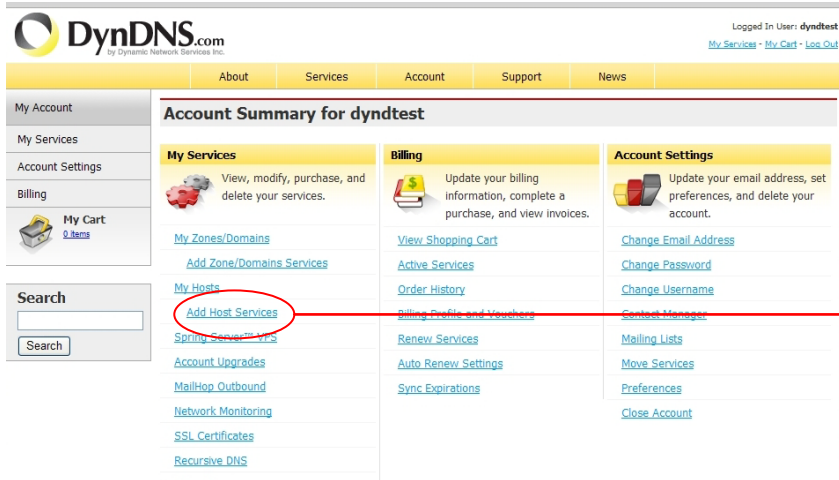
Sincerely,
The DynDNS Team
Dynamic Network Services Inc.
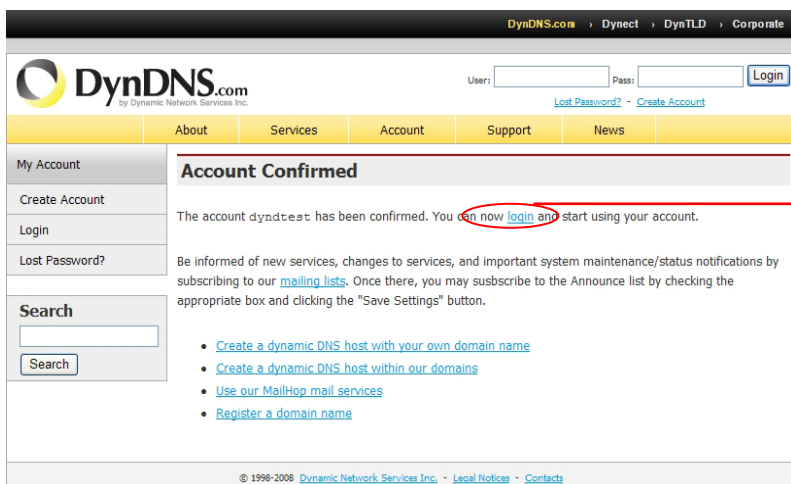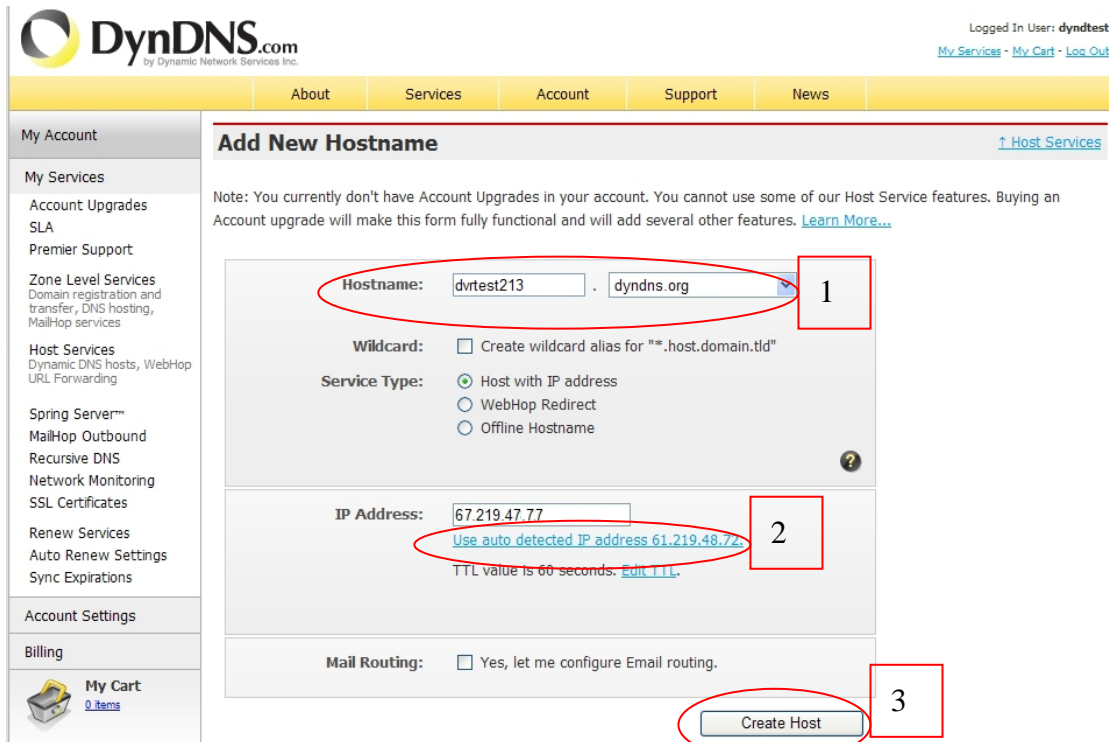
Click Login

C. Add Host Name

Click "Add Host Services" to add a HOST name

1) Create your preferred name of your Hostname.

Note: Hostname can be difference from your Dyndns account user name. It is recommended to use the 'dyndns.org' as extension.

2) Click the 'Use auto detected IP address XX.XX.XXX.XXX' and you will see your WAN IP appear in the column.
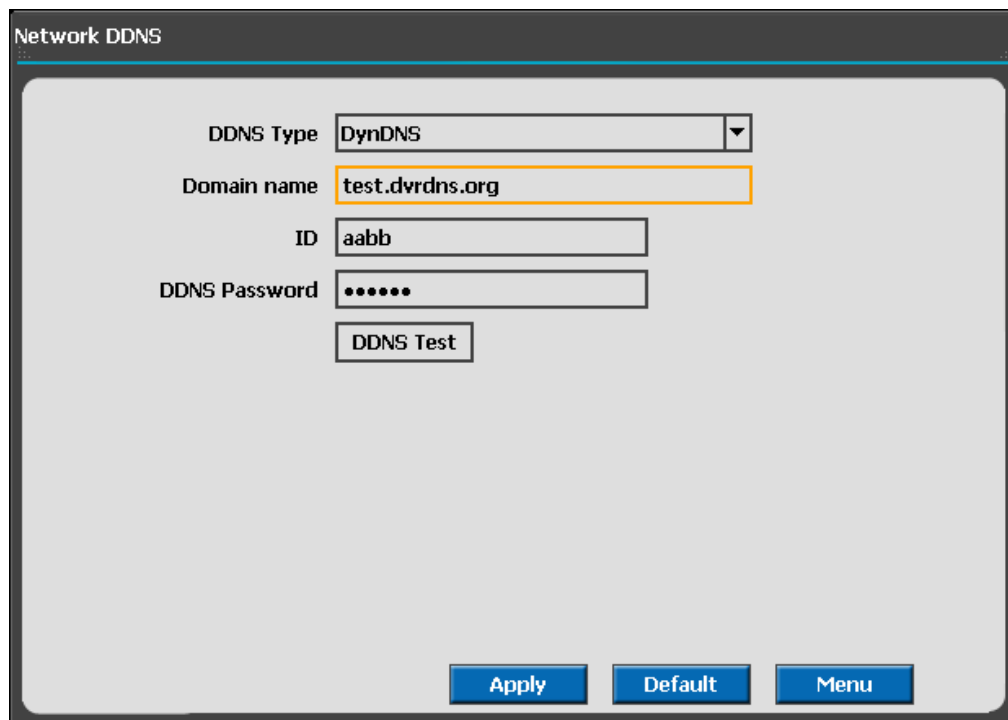
3) Click 'Create Host' button to proceed.

Your Hostname 'XXXXXX.dyndns.org' had been created successfully.

2. DDNS Settings

A. Go to DVR SETUP→NETWORK→DDNS.

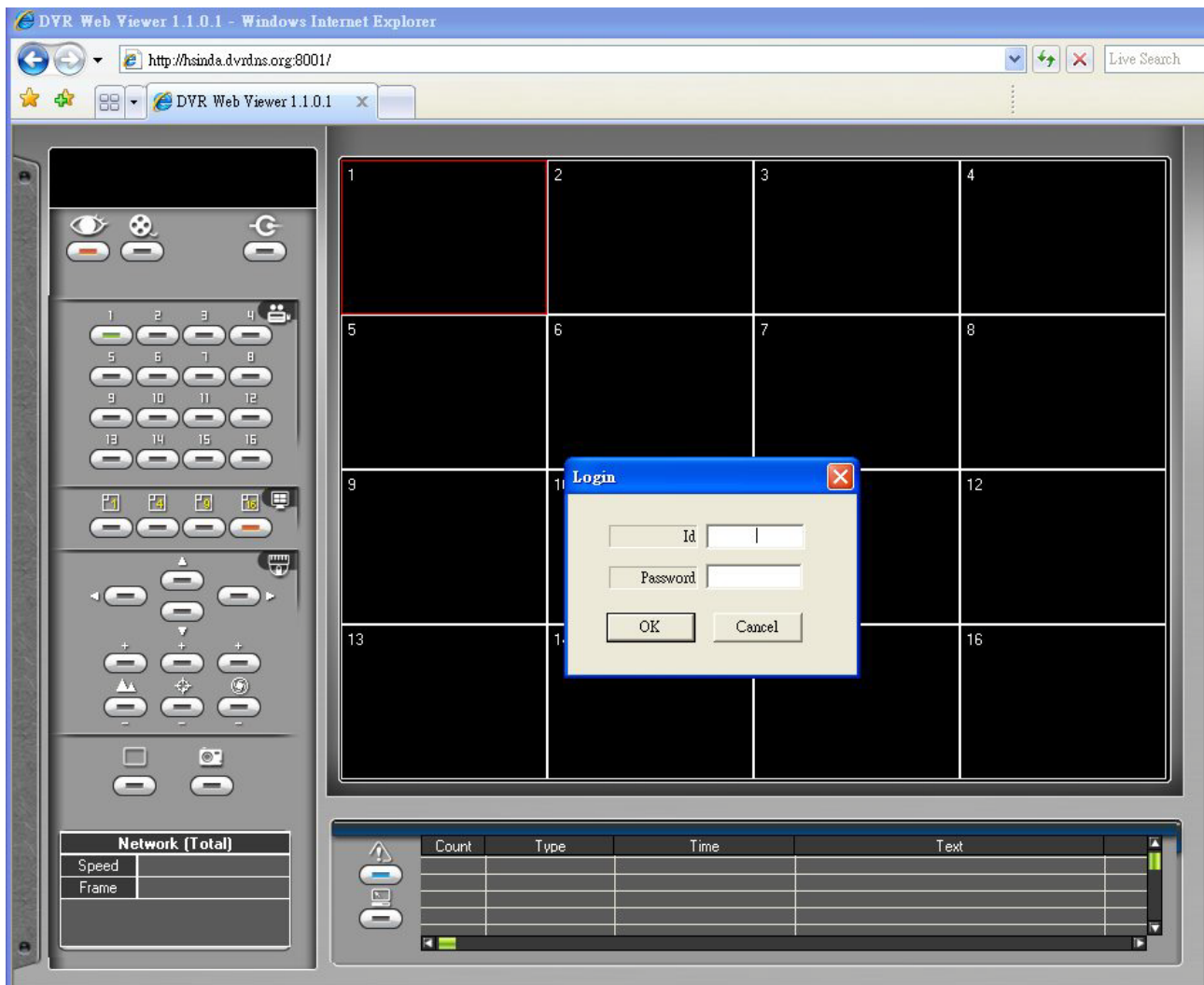**B. Select DDNS Type as DynDNS.**

   Domain Name: Input your registered domain name in Dyndns website. (ex:test.dvrdns.org)

   ID / DDNS Password: Same as register in dyndns web page

   Press Apply and OK button to save changes.

3. Connect with Remote Software or IE Browser

Note : 8001 is referred to web port. User can obtain this information from DVR Setup→Network→Port

APPENDIX B HDD COMPATIBLE TABLE

	Model Name	Capacity	Buffer
HITACHI	HDS728080PLAT20	80 GB	2 M
	HDS721680PLAT80	80 GB	8 M
	HDT722516DLAT80	160 GB	8 M
	HDS722516DLAT80	160 GB	8 M
	HDT722525DLAT80	250 GB	8 M
	HDT725025VLAT80	250 GB	8 M
	HDS722525VLAT80	250 GB	8 M
	HDT725032VLAT80	320 GB	8 M
	HDP725050GLAT80	500 GB	8 M
	HDS725050KLAT80	500 GB	8 M
	HDP72505DGLA360	500GB	16M
	HDS721010KLA330	1TB	32MB
MAXTOR	6Y080L0	80 GB	2 M
	6B160P0	160 GB	2 M
	6Y200P0	250 GB	8 M
	6L300R0	300 GB	16 M
SAMSUNG	SP0822N	80 GB	2 M
	SP1604N	160 GB	2 M
	SP2514N/OMD	250 GB	8 M
	HD300LD	300 GB	8 M
WESTERN DIGITAL	WD1600BB-22GUA0	160 GB	2 M
	WD2000BB-00GUA0	200 GB	8 M
	WD2500BB-00KEA0	250 GB	8 M
	WD2500JB	250 GB	8 M
	WD2500AAKS	250GB	16M
	WD3202ABYS	320GB	16M
	WD5000AACS	500GB	16M
	WD7500AACS	750GB	16M
	WD10EACS	1TB	16M
	WD15EADS	1.5TB	32MB
	ST3800-12ACE	80 GB	2 M
	ST31200-25ACE	120 GB	2 M

	ST3160815AS(Barracuda)	160 GB	8 M
	ST3160815AV	160 GB	8 M
SEAGATE	ST3250820AV(Surveillance)	250 GB	8 M
	ST3250820ACE(Barracuda)	250 GB	8 M
	ST3250410AS(Barracuda)	250 GB	16 M
	ST3300831ACE	300 GB	8 M
	ST3300820ACE	300 GB	8 M
	ST3300831ACE	300 GB	16 M
	ST3400832ACE	400 GB	8 M
	ST3400820ACE	400 GB	8 M
	ST3400620A	400 GB	16 M
	ST3500630AV(Surveillance)	500 GB	16 M
	ST3500630A	500 GB	16 M
	HDS725050KLAT80	500 GB	8 M
	ST3750840ACE	750 GB	8 M
	ST3750640A	750 GB	16 M
	ST31000340SV	1TB	32M

APPENDIX C TROUBLESHOOTING

1). Why DVR cannot be powered up?

ANS: Please make sure the power adapter and power cable are properly connected. If both checked, replace another power adapter.

2). There is no image on monitor

ANS: Please make sure the monitor is ON. For 4CH model, video output switch needs to be flipped to correct output.

3). Why can't I connect to DVR with Client Program or web browser?

ANS: Please make sure the DVR unit is connected the network. For WAN connection, user needs to perform port forwarding in the router.

4). Why the Motion Detection does not work well?

ANS: Please make sure the image is not too bright or dark and try to adjust the sensitivity level. Besides, check the distance of the cameras installed.

5). Why is there a delay between Live screen and actual condition during remote monitoring?

ANS: Due to buffering Live images, there might be changes with actual condition. (1~2 sec).
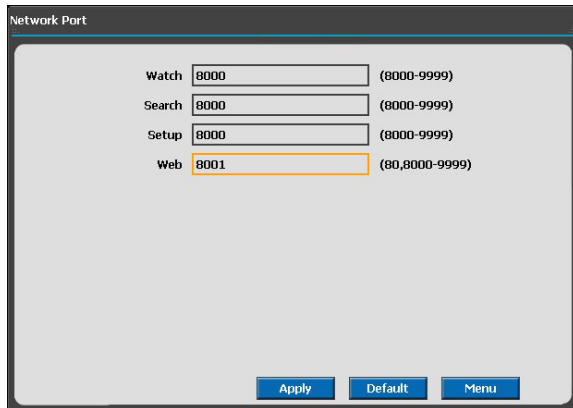
6). Why the remote monitoring quality does not work as well as Live screen?

ANS: Please make sure the PC specifications and VGA Card specifications are appropriate. (Refer to recommended Client PC specifications section)

APPENDIX. D Connection Port

For remote site connection, program using some port to transmit data.

User can finf port setting as below page
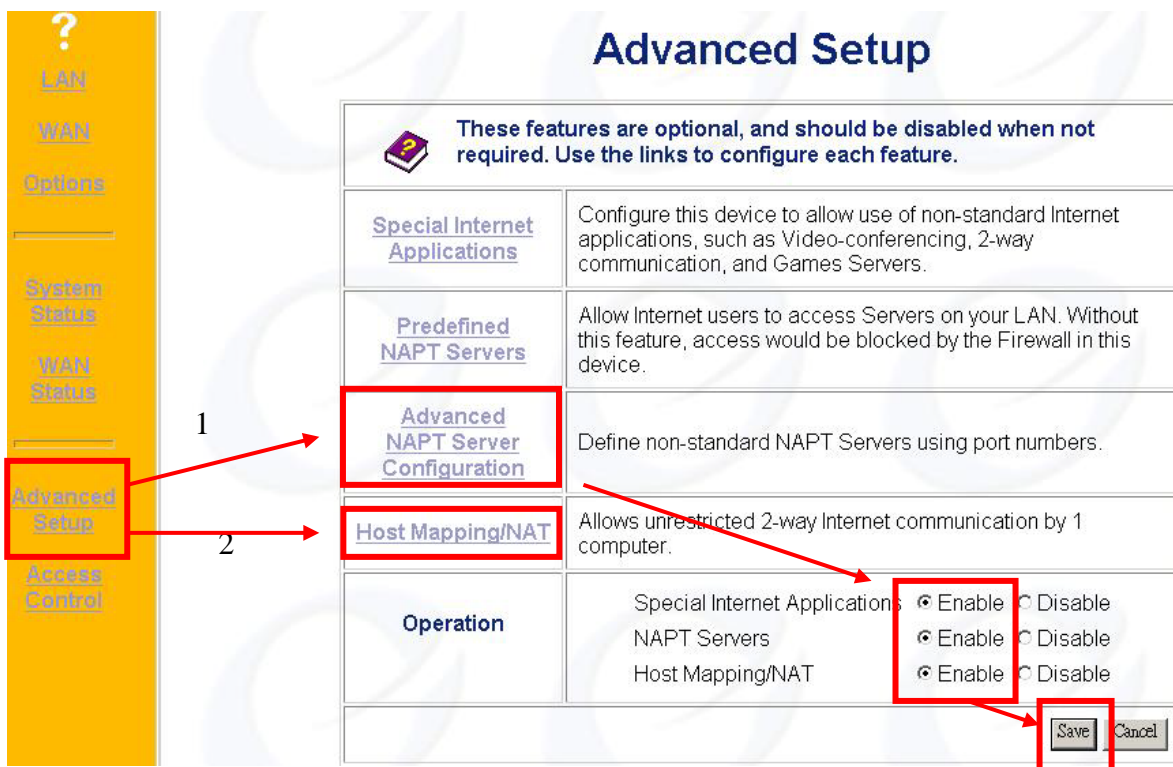
If using same level networking, you don't need to care about it.

But for the other, like Real-IP and Virtual-IP connection, or PC with firewall, you have to know something about it.

In case of Remote site with Virtual-IP, you have to find out the IP-mapping at router(NAT).

For example, Router device: Speed Stream 2601

Supported function: NAPT (Network Address Port Translation), Host Mapping

Please refer the router manual for more detail about setting steps.

In this case, there is two ways to do it.

1. Using NAPT, setup the port which you want to use at remote PC.

Remote's IP address

Type and port number

2. Use Host Mapping, for all of the port to remote PC.